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August 22, 2008

California State Board of Equalization 450 N Street Sacramento, California 94279

Document No. 20802001.14

Attention:

David Gau

Regarding:

Limited Indoor Air Quality Survey

9<sup>™</sup> Floor

Dear Mr. Gau:

On various dates in February, March, and April of 2008, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 9<sup>TH</sup> Floor of the California State Board of Equalization building located at the above mentioned address. At the time of the survey, various samples were collected and direct-reading instruments were used to assess the general indoor air quality, with a clear emphasis on establishing fungal growth exposure potential data. I have enclosed our report, which included general observations, sample and direct-reading results, a discussion of the data, conclusions, and recommendations.

If you have any comments or questions regarding the information contained in this report, please do not hesitate to contact our offices directly at (310) 370-8370.

Sincerely,

HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Brian P. Daly, CIH, PE

President

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# LIMITED INDOOR AIR QUALITY SURVEY

450 N STREET – 9<sup>TH</sup> FLOOR SACRAMENTO, CALIFORNIA

## PREPARED FOR:

CALIFORNIA STATE BOARD OF EQUALIZATION
450 N STREET
SACRAMENTO, CALIFORNIA

### PREPARED BY:

HYGIENE TECHNOLOGIES INTERNATIONAL, INC. 3625 DEL AMO BOULEVARD, SUITE 180 TORRANCE, CALIFORNIA

**AUGUST 22, 2008** 



### 1.0 BACKGROUND

On various dates in February, March, and April of 2008, industrial hygienists with Hygiene Technologies International, Inc. (HygieneTech) conducted a limited indoor air quality survey on the 9<sup>TH</sup> Floor of the California State Board of Equalization Building located at 450 N Street in Sacramento, California. During the survey, a variety of samples were collected and direct-reading instruments were used to assess the general indoor air quality on the 9<sup>TH</sup> Floor of the subject building. Various air and surface samples were collected in order to assess fungal growth exposure potentials and to establish fungal growth assessment information on selected building material surfaces. In addition, air samples were collected throughout the floor for fibrous dust, microbial volatile organic compounds (MVOCs), and total dust analysis and direct-reading instruments were used to determine airborne volatile organic compounds (VOCs), carbon dioxide (CO<sub>2</sub>), ozone (O<sub>3</sub>), air temperature, and relative humidity.

## 2.0 OBSERVATIONS

The interior building materials of the 9<sup>TH</sup> Floor included, but were not limited to, metal window frames; painted gypsum board and/or metal windowsills; metal doorjambs and door frames; painted gypsum board walls in the general work areas; tile covered walls and painted gypsum board ceilings in the restrooms; suspended 2' by 4' ceiling tiles in the general work areas; vinyl cove base; carpet flooring in the general work areas; and ceramic or vinyl tile flooring in the restrooms and break rooms.

The furnishings in the surveyed areas included desks, upholstered chairs, shelves, fabric covered cubicles, office supplies, computers, and other electronic office equipment. The furnishings did not appear to support fungal growth, nor did they appear to have been affected in any other manner by water intrusion. However, be advised that visible accumulation of debris, dust, and other particulates was observed on the reverse side of all sampled HVAC supply air registers.

### 3.0 SAMPLING AND ANALYSIS

Air samples were collected and subsequently analyzed for fungi (including yeasts, molds, rusts, smuts, and mushrooms) by trained and experienced microbiologists at a laboratory accredited by the American Industrial Hygiene Association (AIHA) and that successfully participates in the AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) Program. Other samples were collected for airborne fibers, MVOCs, and total dust determinations using SKC® brand Airchek® 52 sampling pumps and the appropriate sampling media. Pump flow rates were established and verified using a BIOS DryCal DC-Lite primary flow meter. Those samples were collected and analyzed along with blanks (identical sampling media through which no air was drawn), when necessary, at laboratories accredited by the American Industrial Hygiene Association (AIHA) through successful participation in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing Program. Direct-reading instruments were used to determine airborne O<sub>3</sub> and VOC levels, the results of which appear in Table 20802001-141 in Appendix A of this report. A discussion of the airborne CO<sub>2</sub> data, along with air temperature and relative humidity results, appears in Section 4.0 of this report. Additional information concerning the specific sampling and analytical methods appears below.



# 3.0 SAMPLING AND ANALYSIS (CONTINUED)

### 3.1 Airborne Total Fungi

Air samples for airborne total (viable and nonviable) fungi determinations were collected using a Zefon brand Bio-Pump<sup>™</sup> equipped with Allergenco-D<sup>™</sup> cassettes. All such samples were collected at various indoor locations and two samples were collected outdoors on each applicable survey date for comparison purposes. The resultant data, which are presented in spores per cubic meter of air (spores/M³), appear in Table 20802001-135.

## 3.2 <u>Airborne Viable Fungi</u>

Air samples for airborne viable fungi determinations were collected on malt extract agar (MEA) using a Gast brand high volume air-sampling pump equipped with an Aerotech 6<sup>™</sup> Single Stage Bioaerosol Sampler. Two outdoor samples were also collected on the applicable survey date for comparison purposes. The media was incubated prior to enumeration of colony-forming units per agar plate and the resultant data, presented in colony forming units per cubic meter of air (CFU/ M³), can be found in Table 20802001-136.

## 3.3 Surface Fungal Growth Potentials

Surface samples were collected for fungal growth assessment using Zefon brand Bio-Tape<sup>™</sup> surface samplers. Additionally, surface fungi samples were collected from various heating, ventilating, and air conditioning (HVAC) supply air register surfaces using Healthlink<sup>®</sup> Transporters<sup>™</sup> (Rayon tipped swabs immersed in 0.5 ml modified Stuart's transport medium). These data are presented in Table 20802001-137.

### 3.4 Airborne Fibrous Dust

Area air samples for fibrous dust were collected at stationary locations on 25-millimeter diameter, 0.8-micrometer pore size, mixed cellulose ester filters. The samples were analyzed by phase contrast microscopy (PCM) in accordance with the NIOSH Method 7400. These data are presented in fibers per cubic centimeter (f/cc) of air in Table 20802001-138.

### 3.5 Airborne Total Dust

Area air samples for total dust determination were collected at stationary locations on filter cassettes containing pre-weighed 37-millimeter diameter, polyvinyl chloride filters having a pore size of five micrometers. The samples were analyzed by gravimetric method in accordance with the NIOSH Method 0500. These data are presented in milligrams per cubic meter of air (mg/M³) and appear in Table 20802001-139.

### 3.6 <u>Microbial Volatile Organic Compounds</u>

Area samples for MVOCs were collected on solid sorbent tubes equipped with Sagelock fittings. The samples were analyzed by gas chromatography/ mass spectrometry, modified for MVOCs following the AIHA field guide. These data are presented in mg/M³ and appear in Table 20802001-140.



# 3.0 SAMPLING AND ANALYSIS (CONTINUED)

### 3.7 Airborne Volatile Organic Compounds

Direct-reading air measurements for VOCs were also recorded at various locations on the 9<sup>th</sup> Floor using a RAE Systems, Inc. Mini-RAE 2000 photoionization detector, which is capable of detecting a wide variety of unsaturated hydrocarbons at airborne concentrations ranging from 0.1 to 10,000 parts per million (ppm). Prior to the survey, this instrument was calibrated using a 100-ppm isobutylene gas standard. These data are presented in parts per million (ppm).

## 3.8 <u>Airborne Ozone</u>

Direct-reading air measurements for  $O_3$  were recorded at various locations using a Dräger colorimetric detector tube apparatus with the appropriate detector tubes. The data are presented in ppm.

## 3.9 <u>Airborne Carbon Dioxide</u>

Direct-reading air measurements for airborne CO<sub>2</sub> concentration was recorded at a stationary location using a Telaire<sup>®</sup> 7001 Carbon Dioxide and Temperature Monitor along with the HOBO<sup>®</sup> data logger. The data are presented in ppm.

### 3.10 Air Temperature and Relative Humidity

Air temperature and relative humidity data were recorded at a stationary location using a Telaire® 7001 Carbon Dioxide and Temperature Monitor along with the HOBO® data logger.

## 4.0 DISCUSSION

### 4.1 <u>Airborne Total Fungi</u>

The airborne total fungi data showed common spore types outdoors such as *Alternaria*, ascospores, basidiospores, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, *Oidium*, other brown, other colorless, and/or smuts, with basidiospores predominating in both samples. Indoors, the ambient data showed low airborne concentrations of common fungal spores that included one or more of the following: basidiospores, *Cladosporium*, colorless spores typical of *Penicillium* and *Aspergillus* species, other brown, and/or smuts. Indoors, the distribution of fungal spore types detected in the surveyed areas was consistent with those found outdoors, and the overall data within the tested areas were well below the overall data recorded outdoors. These data are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.



# 4.0 DISCUSSION (CONTINUED)

## 4.2 Airborne Viable Fungi

The viable fungi data recorded outdoors showed overall levels of 159 CFU/M³ and 461 CFU/M³ in the two samples collected, with *Cladosporium* predominating in both. Indoors, low levels of common fungi were found including *Aspergillus fumigatus*, *Cladosporium*, *Penicillium*, and/or yeasts. Again, the data recorded were unremarkable and are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.

## 4.3 Surface Fungal Growth Potentials

The surface assessment data involving the samples collected from various cubicle partitions surfaces throughout the 9<sup>TH</sup> Floor indicated no evidence of fungal growth or above-background levels of loose fungal spores on those surfaces. However, the surface assessment data involving samples collected from the HVAC supply air registers indicated fungal growth involving *Cladosporium* and/or colorless spores typical of *Penicillium* and *Aspergillus* on four of the eight registers sampled. Be advised that visible accumulation of debris, dust, and other particulates was observed on the reverse side of all sampled HVAC supply air registers, and that such conditions are indicative of an environment that may promote fungal growth.

### 4.4 Airborne Fibrous Dust

The data recorded in the surveyed areas indicated that airborne fibrous dusts were detected at levels ranging from 0.005 f/cc to 0.01 f/cc. Because the samples were collected at stationary locations at approximate breathing zone height, the resultant data are expected to represent building occupant *exposure potentials* for those persons working in or passing through the areas monitored. These data, which are expected to represent employee *exposure potentials* to fibers of various types, including man-made and natural mineral fibers, cellulosics (paper or wood composition), gypsum, and other fibrous dusts common in the environment, are well below the current Cal-OSHA 8-hour TWA PEL for asbestos fibers of 0.1 f/cc, the most restrictive exposure limit for fibrous dusts.

### 4.5 <u>Airborne Total Dust</u>

Common dust that is typically identified in buildings usually contains a wide variety of materials including, but not limited to, gypsum crystals, cellulosic particles, fiberglass fragments, mineral grains from soil, fungi spores, fine glass fibers, textile and wood fibers, iron or steel fragments, dead skin cells, insect parts, animal dander, and pollens. Generally, exposure to low levels of such materials does not produce ill effects in most persons. In fact, these so-called *nuisance dusts* have a long history of little adverse effect to the lungs and are not known to produce significant diseases or toxic effects, such as collagen (scar tissue) formation, when exposure are kept under reasonable control.

The data recorded in the surveyed areas showed that airborne total dust was not detected at or above the respective laboratory analytical detection limits of 0.13 mg/M³ and 0.14 mg/M³. Because the samples were collected at stationary locations at approximate breathing zone height, the resultant data are expected to represent building occupant *exposure potentials* for those persons working in or passing through the areas monitored. These data are well below the State of California, Department of Industrial Relations, Division of Occupational Safety and Health



# 4.0 DISCUSSION (CONTINUED)

## 4.5 <u>Airborne Total Dust</u> (Continued)

(Cal-OSHA) 8-hour time-weighted average (TWA) permissible exposure limit (PEL) for total dust of 10 mg/M³, as defined in Title 8 of the California Code of Regulations, Section 5155 (T8, CCR § 5155). Note that these data are also well below the American Conference of Governmental Industrial Hygienists 8-hour TWA threshold limit value (TLV-TWA) for particulate (not otherwise classified) of 10 mg/M³; the U.S. Environmental Protection Agency (EPA) National Ambient Air Quality Primary Standard of 0.26 mg/M³ (24-hour standard); and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) theoretical value for non-occupational environments of 1/10 of the TLV.

## 4.6 Airborne Microbial Volatile Organic Compounds

Microbial Volatile Organic Compounds (MVOCs) are composed of low molecular weight alcohols, aldehydes, amines, ketones, terpenes, aromatic and chlorinated hydrocarbons, and sulfur-based compounds that are known to be byproducts of microbial metabolism. MVOCs have a very low odor threshold, thus, making them easily detectable by smell. They often have strong odors and are responsible for the smells generally associated with fungal growth.

The airborne MVOC data indicated the presence of 1-butanol at levels ranging from 360 ng/m³ to 537 ng/m³, 2-hexanone at levels ranging from 69 ng/m³ to 105 ng/m³, and 2-heptanone at levels ranging from 115 ng/m³ to 208 ng/m³. Microbial growth related VOCs would not be expected to be present indoors without additional MVOCs such as ethanol, 1-octen-3-ol, 2-octen-1-ol, benzyl cyanide, 2-methyl-isoborneol, geosmin (1-10-dimethyl-*trans*-9-decalol), and/or terpenes also being present. The fact that the above mentioned MVOC were found at very low levels indoors would indicate that such MVOCs were most likely not fungal growth related and attributable to personal products such as perfumes and other personal cosmetic products. All such data are well below the applicable Cal-OSHA 8-hour TWA PELs as defined in T8, CCR § 5155.

#### 4.7 Airborne Volatile Organic Compounds

With the use of a direct-reading photoionization detector, VOCs were not detected at or above the instrument detection limit of 0.1 ppm. Because these data were recorded at stationary locations at approximate breathing zone height, the results are expected to represent building occupant *exposure* potentials for those persons occupying or passing through the areas monitored. These data were well below the surrogate Cal-OSHA PELs that are often used for comparative purposes regarding VOC exposures, such as those for gasoline, hexane, and varnish makers and painters (VM&P) naphtha.

### 4.8 Airborne Ozone

O<sub>3</sub> was not detected at or above the Dräger instrument detection limits of 0.05 ppm.



# 4.0 DISCUSSION (CONTINUED)

### 4.9 Airborne Carbon Dioxide

On April 7, 2008, the direct-reading results indicated that  $CO_2$  was detected at levels ranging from 493 to 718 ppm on the  $9^{TH}$  Floor. While these data were somewhat higher than the expected outdoor  $CO_2$  levels, which generally range between 320 and 350 ppm, they are considered normal for occupied indoor environments and they are all well below the Cal-OSHA 8-hour TWA PEL for  $CO_2$  of 5000 ppm (T8, CCR, § 5155). They are also below the level of 1000 ppm, which is essentially equivalent to the recommended upper limit for building occupant comfort and odor control established by ASHRAE (not greater than 700 ppm above the outdoor  $CO_2$  value) as stated in ASHRAE 62-2001.

Based on historic studies performed by HygieneTech, building occupant complaints of "stuffy" air often begin when CO<sub>2</sub> levels exceed 800 ppm. HygieneTech has also found that some sensitive persons may experience discomfort, including eye irritation and headache, when CO<sub>2</sub> levels reach 1,000 ppm. Such symptoms are not believed to be the result of an unhealthful exposure to CO<sub>2</sub>; rather, they are thought to be the result of exposure to other common indoor air pollutants which, if not exhausted and/or diluted, can accumulate over time.

### 4.10 Air Temperature and Relative Humidity

On April 7, 2008, the air temperatures ranged between 73.84 and 74.53 degrees Fahrenheit (°F). Based on the experience of HygieneTech, the air temperatures perceived as comfortable by most persons in office environments, and recommended by ASHRAE for occupant comfort, range between 68.0 and 74.5°F (winter) and 73.0 and 79.0°F (summer). The air temperatures recorded in the surveyed areas were well within the comfort range recommended for the summer months.

Relative humidity data were recorded indoors at levels ranging from 23.4 to 27.8 percent. Such levels were well within the 20 to 60 percent relative humidity level range recommended by ASHRAE for occupant comfort. Note that HygieneTech recommends that the relative humidity in buildings not exceed 50 percent in order to limit the potential for fungal growth.

### 5.0 CONCLUSIONS

- 5.1 The airborne total and viable fungi data recorded in the surveyed areas showed airborne fungi levels that were below those recorded outdoors and therefore considered unremarkable. These data are not believed to pose a health risk beyond that posed by the outdoor environment where exposures to airborne fungi are expected.
- 5.2 The surface assessment data involving the samples collected from various cubicle partitions surfaces throughout the 9<sup>TH</sup> Floor indicated no evidence of fungal growth or above-background levels of loose fungal spores on those surfaces. However, the surface assessment data involving samples collected from the HVAC supply air registers indicated fungal growth involving *Cladosporium* and/or colorless spores typical of *Penicillium* and *Aspergillus* on four of the eight registers sampled. Be advised that visible accumulation of debris, dust, and other particulates was observed on the reverse side of all sampled HVAC supply air registers, and that such conditions are indicative of an environment that may promote fungal growth.



# 5.0 CONCLUSIONS (CONTINUED)

- 5.3 The airborne total and fibrous dust, VOC, O<sub>3</sub>, and CO<sub>2</sub> recorded during the survey were unremarkable. Collectively, the data were well below applicable Cal-OSHA 8-hour TWA PELs and/or other occupational, non-occupational, ASHRAE, or foreign guidelines. The data are not expected to represent conditions that pose a measurable health risk to the building occupants.
- 5.4 The airborne MVOC data indicated the presence of 1-butanol at levels ranging from 360 ng/m³ to 537 ng/m³, 2-hexanone at levels ranging from 69 ng/m³ to 105 ng/m³, and 2-heptanone at levels ranging from 115 ng/m³ to 208 ng/m³. Microbial growth related VOCs would not be expected to be present indoors without additional MVOCs such as ethanol, 1-octen-3-ol, 2-octen-1-ol, benzyl cyanide, 2-methyl-isoborneol, geosmin (1-10-dimethyl-*trans*-9-decalol), and/or terpenes also being present. The fact that the above mentioned MVOC were found at very low levels indoors would indicate that such MVOCs were most likely not fungal growth related and attributable to personal products such as perfumes and other personal cosmetic products. All such data are well below the applicable Cal-OSHA 8-hour TWA PELs as defined in T8, CCR § 5155.
- 5.5 On April 7, 2008, the indoor air temperatures ranged between 73.84 and 74.53 degrees Fahrenheit (°F). Based on the experience of HygieneTech, the air temperatures perceived as comfortable by most persons in office environments, and recommended by ASHRAE for occupant comfort, range between 68.0 and 74.5°F (winter) and 73.0 and 79.0°F (summer). The air temperatures recorded in the surveyed areas were well within the comfort range recommended for the summer months. Relative humidity data were recorded indoors at levels ranging from 23.4 to 27.4 percent, levels that were well within the 20 to 60 percent relative humidity level range recommended by ASHRAE for occupant comfort. Note that HygieneTech recommends that the relative humidity in buildings not exceed 50 percent in order to limit the potential for fungal growth.
- 5.6 Be advised that the data provided in this report only represent fungal growth and exposure potentials that existed at the time the survey was performed and at the precise sample locations only, the latter of which were selected based on the available background information provided. Note that fungal growth and exposure potentials may change due to changes in environmental conditions (such as those caused by water intrusion), use of mechanical systems, or other factors. Also be advised that additional fungal growth may exist at one or more locations in the structure that were not specifically assessed during the survey.

### 6.0 **RECOMMENDATIONS**

All such recommendations are based strictly on the assessment information and analytical data that were available to HygieneTech at the time this report was prepared. Be advised that, in order to establish data that accurately reflects all the fungal growth sites on the 9<sup>th</sup> Floor, additional assessment evaluations may be required as more information is known regarding the history of water intrusion episodes in discrete building areas.



# 6.0 RECOMMENDATIONS (CONTINUED)

- 6.1 If not yet established, an accurate record of all air monitoring results should be maintained in accordance with Cal-OSHA regulation found in T8, CCR § 3204. All affected employees should be informed that the *exposure potential* data in this report exist and that those persons, or their representatives, have a right to access relevant exposure data and medical records.
- 6.2 Routine cleaning of the HVAC supply air registers on the 9<sup>th</sup> Floor should be performed to preclude the build-up of dust and debris, which may potentially contribute to fungal growth on those surfaces.
- 6.3 Also be advised that the exposure data recorded during the survey may not be sufficiently broad to adequately assess the suitability of the indoor air quality for all individuals, particularly those who are extremely sensitive to certain chemical and/or biological substances or for those individuals with immune system deficiencies. Although not expected, if persons occupying or passing through the 9<sup>th</sup> Floor do experience non-specific ill effects of unknown etiology, then those affected should be referred to a medical professional in order to determine or specify the possible cause(s) of such reactions. If more information becomes available, further investigation and air monitoring may be warranted.

## HYGIENE TECHNOLOGIES INTERNATIONAL, INC.

Kenny K. Hsi, CIH Technical Director Date: \_\_\_\_ August 22, 2008

Brian P. Daly, CIH, PE

President

Date: August 22, 2008

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279 **APPENDIX A** 

TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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Results reported in spores per cubic meter of air (spores/M³)								
SAMPLE NUMBER	20802001- TM01CCME	20802001- TM02CCME	20802001- TM03CCME	20802001- TM04CCME				
SAMPLING LOCATION/ACTIVITIES	Columns K22 area; about two feet east of Cubicle 078; within ceiling plenum/ Sampling activities only	About two feet south of Column K20; approximately four feet east of Cubicle 066; within ceiling plenum/Sampling activities only	Column K18 area; Cubicle 048; northeastern corner; within ceiling plenum/ Sampling activities only	Column L18 area; Cubicle 006; about center; within ceiling plenum/Sampling activities only				
DATE	02-22-08	02-22-08	02-22-08	02-22-08				
START/STOP	11:20:00/11:25:00	11:30:00/11:35:00	11:40:00/11:45:00	11:50:00/11:55:00				
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes				
Alternaria								
Arthrinium								
Ascospores								
Aureobasidium								
Basidiospores								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium		213	107					
Curvularia								
Epicoccum								
Myrothecium								
Nigrospora								
Oidium								
Other brown								
Penicillium/Aspergillus types	53			107				
Pithomyces								
Rusts								
Smuts (Periconia, Myxomycetes)								
Stachybotrys								
Torula								
Ulocladium								
Hyphal fragments	<13	13	27	<13				
Background particulates*	3+	3+	3+	3+				
TOTAL**	53	213	107	107				

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

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TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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SAMPLE NUMBER	20802001-	20802001-	20802001-	20802001-
	TM05CCME	TM06CCME	TM07CCME	TM08CCME
SAMPLING	Column N18 area;	Column M22 area;	Column N21 area;	Column N19 area;
LOCATION/ACTIVITIES	Cubicle 001; about center; within ceiling	Cubicle 083; within ceiling plenum/	Cubicle 117; within ceiling plenum/	Cubicle 135; within ceiling plenum/
	plenum/Sampling	Sampling activities	Sampling activities	Sampling activities
	activities only	only	only	only
DATE	02-22-08	02-22-08	02-22-08	02-22-08
START/STOP	12:00:00/12:05:00	12:44:00/12:49:00	12:55:00/13:00:00	13:06:00/13:11:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Arthrinium				
Ascospores				
Aureobasidium				
Basidiospores	53			
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	547	107		107
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium				
Other brown			13	
Penicillium/Aspergillus types		53		
Pithomyces				
Rusts				
Smuts (Periconia, Myxomycetes)			160	
Stachybotrys				
Torula				
Ulocladium				
Hyphal fragments	<13	13	13	<13
Background particulates*	3+	3+	3+	3+
TOTAL**	600	160	173	107

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TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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Results reported in spores per cubic meter of air (spores/M³)								
SAMPLE NUMBER	20802001-TM89OUTME	20802001-TM90ME	20802001-TM91ME	20802001-TM92ME				
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	Column K22 area; about two feet west of Cubicle 060; approximately five feet above floor/Normal office activities	Column K21; Cubicle 062; southeastern corner; approximately five feet above floor/Normal office activities	Column K20 area; about four feet north of Cubicle 054; approximately five feet above floor/Normal office activities				
DATE	02-28-08	02-28-08	02-28-08	02-28-08				
START/STOP	10:40:00/10:45:00	10:49:00/10:54:00	10:55:00/11:00:00	11:05:00/11:10:00				
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes				
Alternaria								
Arthrinium								
Ascospores	480							
Aureobasidium								
Basidiospores	7,360							
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	1,330		13					
Curvularia								
Epicoccum								
Nigrospora								
Oidium	13							
Other brown	13	13						
Other colorless	13							
Penicillium/Aspergillus types	107							
Pithomyces								
Rusts								
Smuts (Periconia, Myxomycetes)	27							
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Hyphal fragments	<13	13	<13	<13				
Background particulates*	2+	1+	2+	1+				
TOTAL**	9,343	13	13	<13				

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

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TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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SAMPLE NUMBER	20802001-TM93ME	20802001-TM94ME	20802001-TM95ME	20802001-TM96ME
SAMPLING LOCATION/ACTIVITIES	Column K19 area; about three feet north of Cubicle 038; approximately five feet above floor/Normal office activities	Column K19 area; about two feet south of Cubicle 050; approximately five feet above floor/Normal office activities	Column K18 area; about three feet west of Cubicle 009; approximately five feet above floor/Normal office activities	Column L18 area; about four feet east of Cubicle 011; approximately five feet above floor/Normal office activities
DATE	02-28-08	02-28-08	02-28-08	02-28-08
START/STOP	11:11:00/11:16:00	11:20:00/11:25:00	11:26:00/11:31:00	11:35:00/11:40:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Arthrinium				
Ascospores				
Aureobasidium				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium				
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium				
Other brown				
Penicillium/Aspergillus types				
Pithomyces				
Rusts				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Torula				
Ulocladium				
Hyphal fragments	<13	<13	<13	<13
Background particulates*	1+	2+	2+	1+
TOTAL**	<13	<13	<13	<13

CLIENT: California State Board of Equalization 450 N Street

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TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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SAMPLE NUMBER	20802001-TM97ME	20802001-TM98ME	20802001-TM99ME	20802001-TM100ME
SAMPLING LOCATION/ACTIVITIES	Column M18 area; about two feet south of Cubicle 153; approximately five feet above floor/Normal office activities	Column N18; about six feet south of Cubicle 136; approximately five feet above floor/Normal office activities	Column N19 area; about two feet south of Cubicle 134; approximately five feet above floor/Normal office activities	Column N20 area; Cubicle 118; northeastern corner; approximately five feet above floor/Normal office activities
DATE	02-28-08	02-28-08	02-28-08	02-28-08
START/STOP	11:45:00/11:50:00	13:00:00/13:05:00	13:10:00/13:15:00	13:17:00/13:22:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Arthrinium				
Ascospores				
Aureobasidium				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium		40	120	
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium				
Other brown				
Penicillium/Aspergillus types				
Pithomyces				
Rusts				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Torula				
Ulocladium				
Hyphal fragments	<13	<13	<13	<13
Background particulates*	2+	1+	1+	2+
TOTAL**	<13	40	120	<13

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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SAMPLE NUMBER	20802001-TM101ME	20802001-TM102ME	20802001-TM103ME	20802001-TM104ME
SAMPLING LOCATION/ACTIVITIES	Column N21 area; Cubicle121; northwestern corner; approximately five feet above floor/Normal office activities	Column N21 area; between Cubicle 099 and 100; about center; approximately five feet above floor/Normal office activities	Column N22 area; about four feet east of Cubicle 086; approximately five feet above floor/Normal office activities	Column M22 area; Cubicle 083; about center; approximately five feet above floor/Normal office activities
DATE	02-28-08	02-28-08	02-28-08	02-28-08
START/STOP	13:25:00/13:30:00	13:35:00/13:40:00	13:45:00/13:50:00	13:55:00/14:00:00
SAMPLE TIME	5 minutes	5 minutes	5 minutes	5 minutes
Alternaria				
Arthrinium				
Ascospores				
Aureobasidium				
Basidiospores				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	27			13
Curvularia				
Epicoccum				
Myrothecium				
Nigrospora				
Oidium				
Other brown				
Penicillium/Aspergillus types				
Pithomyces				
Rusts				
Smuts (Periconia, Myxomycetes)				
Stachybotrys				
Torula				
Ulocladium				
Hyphal fragments	<13	<13	<13	<13
Background particulates*	1+	2+	2+	2+
TOTAL**	27	<13	<13	13

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

**APPENDIX A** 

TABLE 20802001-135
AIRBORNE TOTAL FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 22 AND 28, 2008

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SAMPLE NUMBER	20802001-TM105ME	20802001-TM106OUTME	(cpc:co/iii /	
SAMPLING LOCATION/ACTIVITIES	Column L22 area; Cubicle 076; southeastern corner; approximately five feet above floor/Normal office activities	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	This column intentionally left blank	This column intentionally left blank
DATE	02-28-08	02-28-08		
START/STOP	14:01:00/14:06:00	14:10:00/14:15:00		
SAMPLE TIME	5 minutes	5 minutes		
Alternaria		27		
Arthrinium				
Ascospores		213		
Aureobasidium				
Basidiospores		7,250		
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	53	747		
Curvularia				
Epicoccum				
Nigrospora				
Oidium				
Other brown		27		
Penicillium/Aspergillus types		213		
Pithomyces				
Rusts				
Smuts (Periconia, Myxomycetes)		13		
Stachybotrys				
Torula				
Ulocladium				
Hyphal fragments	<13	27		
Background particulates*	1+	3+		
TOTAL**	53	8,490		

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-136
AIRBORNE VIABLE FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBUARY 28, 2008

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Results reported in colony forming units per cubic meter of air (CFU/M³)

Results reported in colony forming units per cubic meter of air (CFU/M³)								
SAMPLE NUMBER	20802001-VM39OUTME	20802001-VM40ME	20802001-VM41ME	20802001-VM42ME				
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	Column K22 area; about two feet west of Cubicle 060; approximately five feet above floor/Normal office activities	Column K19 area; about three feet north of Cubicle 038; approximately five feet above floor/Normal office activities	Column K18 area; about three feet west of Cubicle 009; approximately five feet above floor/Normal office activities				
START/STOP	10:41:00/10:43:00	10:52:00/10:54:00	11:17:00/11:19:00	11:32:00/11:34:00				
SAMPLE TIME	2 minutes	2 minutes	2 minutes	2 minutes				
Acremonium								
Alternaria								
Aspergillus flavus								
Aspergillus fumigatus								
Aspergillus niger								
Aspergillus versicolor								
Aureobasidium								
Beauveria								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	141	35	18					
Curvularia								
Epicoccum								
Nigrospora								
Memnoniella								
Myrothecium								
Non-sporulating fungi								
Others								
Paecilomyces								
Penicillium								
Phoma/coelomycetes								
Sporobolomyces								
Stachybotrys								
Trichoderma	18							
Ulocladium								
Yeasts		18						
TOTAL	159	53	18	<18				

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-136
AIRBORNE VIABLE FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBUARY 28, 2008

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Results reported in colony forming units per cubic meter of air (CFU/M<sup>3</sup>)

SAMPLE NUMBER	20802001-VM43ME	20802001-VM44ME	20802001-VM45ME	20802001-VM46ME
SAMPLING LOCATION/ACTIVITIES	Column M18 area; about two feet south of Cubicle 153; approximately five feet above floor/Normal office activities	Column N18; about six feet south of Cubicle 136; approximately five feet above floor/Normal office activities	Column N21 area; between Cubicle 099 and 100; about center; approximately five feet above floor/Normal office activities	Column N22 area; about four feet east of Cubicle 086; approximately five feet above floor/Normal office activities
START/STOP	11:51:00/11:53:00	13:06:00/13:08:00	13:41:00/13:43:00	13:51:00/13:53:00
SAMPLE TIME	2 minutes	2 minutes	2 minutes	2 minutes
Acremonium				
Alternaria				
Aspergillus flavus				
Aspergillus fumigatus		18		
Aspergillus niger				
Aspergillus versicolor				
Aureobasidium				
Beauveria				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium				18
Curvularia				
Epicoccum				
Nigrospora				
Memnoniella				
Myrothecium				
Non-sporulating fungi				
Others				
Paecilomyces				
Penicillium				18
Phoma/coelomycetes				
Sporobolomyces				
Stachybotrys				
Trichoderma				
Ulocladium				
Yeasts				
TOTAL	<18	18	<18	36

CLIENT: California State Board of Equalization 450 N Street

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**APPENDIX A** 

TABLE 20802001-136
AIRBORNE VIABLE FUNGI RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBUARY 28, 2008

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Results reported in colony forming units per cubic meter of air (CFU/M³)

SAMPLE NUMBER	20802001-VM47OUTME			
SAMPLING LOCATION/ACTIVITIES	Outdoors; about 25 feet east of building; approximately five feet above ground/Normal outdoor activities	This column intentionally left blank	This column intentionally left blank	This column intentionally left blank
START/STOP	14:16:00/14:18:00			
SAMPLE TIME	2 minutes			
Acremonium				
Alternaria	18			
Aspergillus flavus				
Aspergillus niger				
Aspergillus other				
Aspergillus versicolor				
Aureobasidium	18			
Beauveria				
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium	389			
Curvularia				
Epicoccum	18			
Nigrospora				
Memnoniella				
Myrothecium				
Non-sporulating fungi				
Others				
Paecilomyces				
Penicillium	18			
Phoma/coelomycetes				
Sporobolomyces				
Stachybotrys				
Trichoderma				
Ulocladium				
Yeasts				
TOTAL	461			

CLIENT: California State Board of Equalization

450 N Street

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**APPENDIX A** 

TABLE 20802001-137
SURFACE FUNGAL GROWTH POTENTIALS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 20 AND 22, 2008

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							Page 1
DATE	SAMPLE NUMBER	SAMPLING LOCATION	AMORPHOUS DEBRIS	MISCELLANEOUS FUNGI/POLLEN*	FUNGI SEEN WITH UNDERLYING MYCELIAL AND/OR SPORULATING STRUCTURES**	OTHER COMMENTS	GENERAL IMPRESSION
02-20-08	20802001- TL129ME	Column K22 area; Cubicle 074; southern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL130ME	Column K21 area; Cubicle 062; southern cubicle partition; about center; from top horizontal surface	Light	Very few	None	None	Background
02-20-08	20802001- TL131ME	Column K20 area; Cubicle 054; northern cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL132ME	Column K19 area; Cubicle 045; southern cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL133ME	Column K21 area; Cubicle 067; northern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL134ME	Column K20 area; Cubicle 041; northern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL135ME	Column K19 area; Cubicle 029; southern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL136ME	Column K18 area; Cubicle 034; eastern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL137ME	Column L18 area; Cubicle 007; western cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL138ME	Column M18 area; Cubicle 003; western cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL139ME	Column N18 area; Cubicle 150; eastern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL140ME	Column N19 area; Cubicle 140; northern cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background

<sup>\*</sup>Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating (indicative of normal trapping).

<sup>\*\*</sup>Quantities of fungi are graded (from least to greatest) as <1+ to 4+.

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450 N Street

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**APPENDIX A** 

TABLE 20802001-137
SURFACE FUNGAL GROWTH POTENTIALS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 20 AND 22, 2008

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	1			I	1		
DATE	SAMPLE NUMBER	SAMPLING LOCATION	AMORPHOUS DEBRIS	MISCELLANEOUS FUNGI/POLLEN*	FUNGI SEEN WITH UNDERLYING MYCELIAL AND/OR SPORULATING STRUCTURES**	OTHER COMMENTS	GENERAL IMPRESSION
02-20-08	20802001- TL141ME	Column N20 area; Cubicle 130; southern cubicle partition; about center; from top horizontal surface	Moderate	Very few	None	None	Background
02-20-08	20802001- TL142ME	Column N21 area; Cubicle 122; northern cubicle partition; about center; from top horizontal surface	Scant	None	None	None	Background
02-20-08	20802001- TL143ME	Column N21 area; Cubicle 105; northern cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL144ME	Column N20 area; Cubicle 118; eastern cubicle partition; about center; from top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL145ME	Column N19 area; Cubicle 144; northern cubicle partition; about center; from top horizontal surface	Light	Very few	None	None	Background
02-20-08	20802001- TL146ME	Column N22 area; Cubicle 111; western cubicle partition; about center; form top horizontal surface	Light	None	None	None	Background
02-20-08	20802001- TL147ME	Column M22 area; Cubicle 084; eastern cubicle partition wall; about center; from top horizontal surface	Light	Very few	None	None	Background
02-20-08	20802001- TL148ME	Column L22 area; Cubicle 090; western cubicle partition wall; about center; from top horizontal surface	Moderate	Very few	None	None	Background
02-22-08	20802001- S01ME	Column K22 area; Cubicle 078; ceiling; from reverse side of HVAC supply air register	Moderate	Very few	<1+ Cladosporium species (spores, hyphae)	None	Minimal fungal growth
02-22-08	20802001- S02ME	Column K20 area; print station; ceiling; from reverse side of HVAC supply air register	Moderate	None	2+ colorless spores typical of <i>Penicillium /</i> <i>Aspergillus</i> (spores)	None	Fungal growth
02-22-08	20802001- S03ME	Column K18 area; Cubicle 048; ceiling; from reverse side of HVAC supply air register	Moderate	Few	None	None	Background
02-22-08	20802001- S04ME	Column L18 area; Cubicle 006; ceiling; from reverse side of HVAC supply air register	Moderate	Very few	1+ colorless spores typical of <i>Penicillium /</i> <i>Aspergillus</i> (spores)	None	Fungal growth

<sup>\*</sup>Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating (indicative of normal trapping).

<sup>\*\*</sup>Quantities of fungi are graded (from least to greatest) as <1+ to 4+.

CLIENT: California State Board of Equalization 450 N Street

Sacramento, California 94279

TABLE 20802001-137
SURFACE FUNGAL GROWTH POTENTIALS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA

**FEBRUARY 20 AND 22, 2008** 

**APPENDIX A** 

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DATE	SAMPLE NUMBER	SAMPLING LOCATION	AMORPHOUS DEBRIS	MISCELLANEOUS FUNGI/POLLEN*	FUNGI SEEN WITH UNDERLYING MYCELIAL AND/OR SPORULATING STRUCTURES**	OTHER COMMENTS	GENERAL IMPRESSION
02-22-08	20802001- S05ME	Column N18 area; Cubicle 001; ceiling; from reverse side of HVAC supply air register	Scant	Very few	None	None	Background
02-22-08	20802001- S06ME	Column M22 area; Cubicle 083; ceiling; from reverse side of HVAC air register	Moderate	Variety	None	None	Background
02-22-08	20802001- S07ME	Column N21 area; Cubicle 117; ceiling; ;from reverse side of HVAC supply air register	Heavy	Variety	<1+ Penicillium species (spores, hyphae, conidiophores)	None	Minimal fungal growth
02-22-08	20802001- S08ME	Column N19 area; Cubicle135; ceiling; from reverse side of HVAC supply air register	Moderate	Variety	None	None	Background

<sup>\*</sup>Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating (indicative of normal trapping).

<sup>\*\*</sup>Quantities of fungi are graded (from least to greatest) as <1+ to 4+.

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**



TABLE 20802001-138
AIRBORNE FIBERS RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
MARCH 12, 2008

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (f/cc)	PEL (f/cc)
Area Sample	Column K22 area; ceiling; about one foot south of Cubicle 072; approximately six feet above floor/Normal office activities	N/A	20803001-F15ME	8:43/ 17:04	501 minutes	Fibers	0.007	0.1
Area Sample	Column K20 area; ceiling; about three feet east of Cubicle 065; approximately six feet above floor/Normal office activities	N/A	20803001-F16ME	8:46/ 17:04	498 minutes	Fibers	0.005	0.1
Area Sample	Column K18 area; ceiling; about ten feet south of Cubicle 033; approximately six feet above floor/Normal office activities;	N/A	20803001-F17ME	8:49/ 17:05	496 minutes	Fibers	0.005	0.1
Area Sample	Column; N18 area; ceiling; about three feet west of Cubicle 151; approximately six feet above floor/Normal office activities;	N/A	20803001-F18ME	9:05/ 17:05	480 minutes	Fibers	0.007	0.1
Area Sample	Column N20 area ;ceiling; about two feet east of Cubicle 118; approximately six feet above floor/Normal office activities	N/A	20803001-F19ME	9:06/ 17:17	491 minutes	Fibers	0.01	0.1
Area Sample	Column N22 area; ceiling; about three feet south of Cubicle 125; approximately six feet above floor/Normal office activities	N/A	20803001-F20ME	9:10/ 17:18	488 minutes	Fibers	0.006	0.1
Area Sample	Between Column L22 and M22 area; ceiling; about one foot east of Cubicle 082; approximately six feet above floor/Normal office activities	N/A	20803001-F21ME	9:18/ 17:19	481 minutes	Fibers	0.005	0.1
Blank	N/A	N/A	20803001- F46BLANKME	N/A	N/A	Fibers	All data blank corrected	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

<: Less than

f/cc: Fibers per cubic centimeter of air

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**



TABLE 20802001-139
AIRBORNE TOTAL DUST RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 27, 2008

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M³)	PEL (mg/M³)
Area Sample	Column K22; Cubicle 077; southwestern corner; approximately six feet above floor/Normal office activities	N/A	20802001-TD21ME	8:22/ 14:48	386 minutes	Total dust	<0.13	10
Area Sample	Column K21 area; Cubicle 061; southeastern corner; approximately six feet above floor/Normal office activities	N/A	20802001-TD22ME	8:40/ 14:50	370 minutes	Total dust	<0.14	10
Area Sample	Column K20 area; between Cubicle 026 and 041; approximately six feet above floor/Normal office activities	N/A	20802001-TD23ME	8:41/ 15:02	381 minutes	Total dust	<0.13	10
Area Sample	Column K18 area; about four feet southeast of print station; approximately six feet above floor/Normal office activities	N/A	20802001-TD24ME	8:46/ 15:04	378 minutes	Total dust	<0.13	10
Area Sample	Column L18 area; Cubicle 007; southwestern corner; approximately six feet above floor/Normal office activities	N/A	20802001-TD25ME	8:53/ 15:09	376 minutes	Total dust	<0.13	10
Area Sample	Column M18 area; between Cubicle 013 and 154; approximately six feet above floor/Normal office activities	N/A	20802001-TD26ME	8:58/ 15:11	373 minutes	Total dust	<0.13	10
Area Sample	Column N19 area; Cubicle 138; northwestern corner; approximately six feet above floor/Normal office activities	N/A	20802001-TD27ME	9:04/ 15:12	368 minutes	Total dust	<0.14	10
Area Sample	Column N20 area; about three feet east of print station; approximately six feet above floor/Normal office activities	N/A	20802001-TD28ME	9:09/ 15:15	366 minutes	Total dust	<0.14	10
Area Sample	Column N22 area; about three feet northwest of print station approximately six feet above floor/Normal office activities	N/A	20802001-TD29ME	9:13/ 15:18	365 minutes	Total dust	<0.14	10
Blank	N/A	N/A	20803001-TD102BLKME	N/A	N/A	Total dust	All data blank corrected	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

<: Less than

mg/M3: Milligrams per cubic meter

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-140
MICROBIAL VOLATILE ORGANIC COMPOUNDS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
MARCH 26, 2008

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NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M³)	PEL (mg/M³)
Area Sample	About six feet south of Column K20;	N/A	20803001-	11:29/	122	3-Methylfuran	nd	N/A
	approximately six feet above floor/Normal office		M17JL	13:31	minutes	2-Methyl-1-propanol	nd	N/A
	activities					1-Butanol	401 x10 <sup>-6</sup>	300
						3-Methyl-2-butanol	nd	N/A
						2-Pentanol	nd	N/A
						3-Methyl-2-butanol	nd	N/A
						Methyl disulfide	nd	N/A
						Ethyl isobutyrate	nd	N/A
						2-Hexanone	103 x10 <sup>-6</sup>	410
						2-Heptanone	158 x10 <sup>-6</sup>	468
						5-Methyl-3-heptanone	nd	130
						1-Octen-3-ol	nd	N/A
						3-Octanone	nd	N/A
						3-Octanol	nd	N/A
						2-Pentylfuran	nd	N/A
						2-Octen-1-ol	nd	N/A
						2-Methoxy-3-1(methylethyl) pyrazine	nd	N/A
						2-Nonanone	nd	N/A
						Fenchone	nd	N/A
						2-Methyl-isoborneol	nd	N/A
						a-Terpineol	nd	N/A
						Borneol	nd	N/A
						Geosmin	nd	N/A
						Thujopsene	nd	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

mg/M<sup>3</sup>: Milligrams per cubic meter

<: Less than

PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-140
MICROBIAL VOLATILE ORGANIC COMPOUNDS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
MARCH 26, 2008

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NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M³)	PEL (mg/M³)
Area Sample	Column L18 area; Cubicle 006; about center;	N/A	20803001-	11:45/	121	3-Methylfuran	nd	N/A
	approximately six feet above floor/Normal office		M18JL	13:46	minutes	2-Methyl-1-propanol	nd	N/A
	activities					1-Butanol	360 x10 <sup>-6</sup>	300
						3-Methyl-2-butanol	nd	N/A
						2-Pentanol	nd	N/A
						3-Methyl-2-butanol	nd	N/A
						Methyl disulfide	nd	N/A
						Ethyl isobutyrate	nd	N/A
						2-Hexanone	105 x10 <sup>-6</sup>	410
						2-Heptanone	208 x10 <sup>-6</sup>	468
						5-Methyl-3-heptanone	nd	130
						1-Octen-3-ol	nd	N/A
						3-Octanone	nd	N/A
						3-Octanol	nd	N/A
						2-Pentylfuran	nd	N/A
						2-Octen-1-ol	nd	N/A
						2-Methoxy-3-1(methylethyl) pyrazine	nd	N/A
						2-Nonanone	nd	N/A
						Fenchone	nd	N/A
						2-Methyl-isoborneol	nd	N/A
						a-Terpineol	nd	N/A
						Borneol	nd	N/A
						Geosmin	nd	N/A
						Thujopsene	nd	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

mg/M<sup>3</sup>: Milligrams per cubic meter

<: Less than

PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-140
MICROBIAL VOLATILE ORGANIC COMPOUNDS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
MARCH 26, 2008

Page 3

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M³)	PEL (mg/M³)
Area Sample	About six feet north of Column N20;	N/A	20803001-	11:49/	121	3-Methylfuran	nd	N/A
	approximately six feet above floor/Normal office		M19JL	13:50	minutes	2-Methyl-1-propanol	nd	N/A
	activities					1-Butanol	537 x10 <sup>-6</sup>	300
						3-Methyl-2-butanol	nd	N/A
						2-Pentanol	nd	N/A
						3-Methyl-2-butanol	nd	N/A
						Methyl disulfide	nd	N/A
						Ethyl isobutyrate	nd	N/A
						2-Hexanone	76 x10 <sup>-6</sup>	410
						2-Heptanone	198 x10 <sup>-6</sup>	468
						5-Methyl-3-heptanone	nd	130
						1-Octen-3-ol	nd	N/A
						3-Octanone	nd	N/A
						3-Octanol	nd	N/A
						2-Pentylfuran	nd	N/A
						2-Octen-1-ol	nd	N/A
						2-Methoxy-3-1(methylethyl) pyrazine	nd	N/A
						2-Nonanone	nd	N/A
						Fenchone	nd	N/A
						2-Methyl-isoborneol	nd	N/A
						a-Terpineol	nd	N/A
						Borneol	nd	N/A
						Geosmin	nd	N/A
						Thujopsene	nd	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

mg/M<sup>3</sup>: Milligrams per cubic meter

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279

# **APPENDIX A**

TABLE 20802001-140
MICROBIAL VOLATILE ORGANIC COMPOUNDS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
MARCH 26, 2008

Page 4

NAME/ REFERENCE	LOCATION/ ACTIVITIES	PPE USED	SAMPLE NUMBER	START/ STOP	SAMPLE TIME	CONTAMINANT	RESULTS (mg/M³)	PEL (mg/M³)
Area Sample	Column M22 area; about one foot west of Cubicle	N/A	20803001-	11:52/	121	3-Methylfuran	nd	N/A
	088; approximately six feet above floor/Normal	-	M20JL	13:53	minutes	2-Methyl-1-propanol	nd	N/A
	office activities					1-Butanol	500 x10 <sup>-6</sup>	300
						3-Methyl-2-butanol	nd	N/A
						2-Pentanol	nd	N/A
						3-Methyl-2-butanol	nd	N/A
						Dimethyl disulfide	nd	N/A
						Ethyl isobutyrate	nd	N/A
						2-Hexanone	69 x10 <sup>-6</sup>	410
						2-Heptanone	115 x10 <sup>-6</sup>	468
						5-Methyl-3-heptanone	nd	130
						1-Octen-3-ol	nd	N/A
						3-Octanone	nd	N/A
						3-Octanol	nd	N/A
						2-Pentylfuran	nd	N/A
						2-Octen-1-ol	nd	N/A
						2-Methoxy-3-1(methylethyl) pyrazine	nd	N/A
						2-Nonanone	nd	N/A
						Fenchone	nd	N/A
						2-Methyl-isoborneol	nd	N/A
						a-Terpineol	nd	N/A
						Borneol	nd	N/A
						Geosmin	nd	N/A
						Thujopsene	nd	N/A

#### **LEGEND**

PPE: Personal protective equipment

N/A: Not applicable

mg/M<sup>3</sup>: Milligrams per cubic meter

<: Less than

PEL: Cal-OSHA 8-hour time-weighted average permissible exposure limit

CLIENT: California State Board of Equalization 450 N Street Sacramento, California 94279



TABLE 20802001-141
DIRECT-READING RESULTS
9<sup>TH</sup> FLOOR
SACRAMENTO, CALIFORNIA
FEBRUARY 20, 2008

LOCATION/SITE ACTIVITIES	SAMPLE TIME	CONTAMINANT	RESULTS (ppm)	COMMENTS
Column K22 area; about five feet east of Cubicle 078; approximately five feet above floor/Normal	15:30/15:33	Volatile Organic Compounds	ND < 0.1	N/A
office activities		Ozone	ND < 0.05	
Column K18 area; about five feet north of Cubicle 048; approximately five feet above floor/Normal	15:35/15:38	Volatile Organic Compounds	ND <0.1	N/A
office activities		Ozone	ND < 0.05	
Column N18 area; about five feet west of Cubicle 001; approximately five feet above floor/Normal	15:45/15:48	Volatile Organic Compounds	ND < 0.1	N/A
office activities		Ozone	ND < 0.05	
Column N22 area; about five feet south of Cubicle 125; approximately five feet above floor/Normal	15:55/15:58	Volatile Organic Compounds	ND < 0.1	N/A
office activities		Ozone	ND < 0.05	

ND: Not detected <: Less than

N/A: Not applicable ppm: Parts per million



Report for:

Mr. Wes Frey Hygiene Technologies International, Inc.: Northern California 3127 Bowen Island Street West Sacramento, CA 95691

Regarding: Project: 20802001

EMĹ ID: 394505

Approved by:

Dates of Analysis:

Spore trap analysis: 03-05-2008

Lab Manager Magzoub Ismail

Project SOPs: Spore trap analysis (I100000)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

5473 Kearny Villa Road, Suite 130, San Diego, CA 92123 (858) 569-5800 Fax (858) 569-5806 www.emlab.com

Client: Hygiene Technologies International, Inc.:

Northern California

C/O: Mr. Wes Frey

Date of Sampling: 02-28-2008

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2080 TM89	02001- 9outME	2080 TM	02001- 90ME	TM	02001- 91ME	TM	02001- 92ME
Comments (see below)	N	lone	N	Vone	N	Vone	N	Vone
Lab ID-Version‡:	173	2124-1	173	2125-1	173	2126-1	173	2127-1
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria		_		_		_		_
Arthrinium								
Ascospores*	9	480						
Aureobasidium								
Basidiospores*	138	7,360						
Bipolaris/Drechslera group		,						
Botrytis								
Chaetomium								
Cladosporium	25	1,330			1	13		
Curvularia		,						
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Oidium	1	13						
Other brown	1	13	1	13				
Other colorless	1	13						
Penicillium/Aspergillus types†	2	107						
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*	2	27						
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		1+		2+		1+	
Hyphal fragments/m3	< 13		13		< 13		< 13	
Pollen/m3	160		< 13		< 13		< 13	
Skin cells (1-4+)	None		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		9,343		13		13		< 13

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

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Client: Hygiene Technologies International, Inc.:

Northern California

C/O: Mr. Wes Frey

Date of Sampling: 02-28-2008

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	2080 TM	02001- 93ME	2080 TM	02001- 94ME		02001- 95ME	TM	02001- 96ME
Comments (see below)	N	lone	N	lone	N	Vone	N	Vone
Lab ID-Version‡:	173	2128-1	173	2129-1	173	2130-1	173	2131-1
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria						_		_
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium								
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Oidium								
Other brown								
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		2+		2+		1+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		< 13		< 13		< 13		< 13

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

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<sup>‡</sup> A "Version" greater than 1 indicates amended data.

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	TM	02001- 97ME	TM	02001- 98ME	TM	02001- 99ME	TM	02001- 100ME
Comments (see below)	N	lone	N	lone	N	Vone	N	Vone
Lab ID-Version‡:	173	2132-1	173	2133-1	173	2134-1	173	2135-1
	raw ct.	spores/m3						
Alternaria		_		_		_		
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium			3	40	9	120		
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Oidium								
Other brown								
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		1+		1+		2+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13	
Pollen/m3	< 13		< 13		13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		< 13		40		120		< 13

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

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<sup>‡</sup> A "Version" greater than 1 indicates amended data.

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		02001- 101ME		02001- 102ME		02001- 103ME		02001- 104ME
Comments (see below)		lone		lone		Vone		None
Lab ID-Version‡:	173	2136-1	173	2137-1	173	2138-1	173	2139-1
·	raw ct.	spores/m3						
Alternaria						•		•
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	2	27					1	13
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Oidium								
Other brown								
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		2+		2+		2+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13	
Pollen/m3	< 13		13		13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		27		< 13		< 13		13

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

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(858) 569-5800 Fax (858) 569-5806 www.emlab.com

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Northern California C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

## SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	20802001-TM105ME		20802001-TM106outME	
Comments (see below)	None		None	
Lab ID-Version‡:	1732140-1		1732141-1	
	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria			2	27
Arthrinium				
Ascospores*			4	213
Aureobasidium				
Basidiospores*			136	7,250
Bipolaris/Drechslera group				,
Botrytis				
Chaetomium				
Cladosporium	4	53	14	747
Curvularia				
г.				
Fusarium				
Myrothecium				
Nigrospora				
Oidium				
Other brown			2	27
Other colorless			_	
Penicillium/Aspergillus types†			4	213
Pithomyces				
Rusts*				
Smuts*, Periconia, Myxomycetes*			1	13
Stachybotrys				
G. 1 11				
Torula				
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	1+		3+	
Hyphal fragments/m3	< 13		27	
Pollen/m3	13		93	
Skin cells (1-4+)	< 1+		< 1+	
Sample volume (liters)	75		75	
TOTAL SPORE/m3		53		8,490

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

## **MoldRANGETM: Extended Outdoor Comparison**

Outdoor Location: 20802001-TM89outME

Fungi Identified	Outdoor	Typical Outdoor Data by Date†			Typical Outdoor Data by Location:				
	data	Month: February			State: CA				
	spores/m3	low	med	high	freq %	low	med	high	freq %
Generally able to grow indoors*									
Alternaria	-	7	19	190	35	7	27	230	60
Bipolaris/Drechslera group	-	7	13	160	10	7	13	120	14
Chaetomium	-	7	13	130	7	7	13	110	19
Cladosporium	1,330	27	290	4,300	89	53	640	6,500	98
Curvularia	-	7	13	340	8	7	13	210	7
Nigrospora	-	7	13	140	8	7	13	170	8
Other brown	13	7	13	80	33	7	13	80	37
Other colorless	13	7	13	120	7	7	13	93	7
Penicillium/Aspergillus types	107	27	160	1,700	84	40	210	2,500	89
Stachybotrys	-	7	13	370	3	7	13	330	5
Torula	-	7	13	230	5	7	13	150	13
Seldom found growing indoors**									
Ascospores	480	13	110	2,200	67	13	110	1,800	73
Basidiospores	7,360	13	270	8,600	87	13	270	6,900	95
Oidium	13	7	13	170	9	7	13	200	20
Rusts	-	7	13	240	11	7	13	270	29
Smuts, Periconia, Myxomycetes	27	7	27	270	53	8	40	480	71
TOTAL SPORES/M3	9,343								

<sup>†</sup> The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 2.5% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

<sup>‡</sup> The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

<sup>\*</sup>The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. Cladosporium is one of the predominant spore types worldwide and is frequently present in high numbers. Penicillium/Aspergillus species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

<sup>\*\*</sup>These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

## **MoldRANGETM: Extended Outdoor Comparison** Outdoor Location: 20802001-TM106outME

Fungi Identified	Outdoor	Typica	Typical Outdoor Data by Date†			Typical Outdoor Data by Location:			
	data		Month: February			State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
Generally able to grow indoors*									
Alternaria	27	7	19	190	35	7	27	230	60
Bipolaris/Drechslera group	-	7	13	160	10	7	13	120	14
Chaetomium	-	7	13	130	7	7	13	110	19
Cladosporium	747	27	290	4,300	89	53	640	6,500	98
Curvularia	-	7	13	340	8	7	13	210	7
Nigrospora	-	7	13	140	8	7	13	170	8
Other brown	27	7	13	80	33	7	13	80	37
Other colorless	-	7	13	120	7	7	13	93	7
Penicillium/Aspergillus types	213	27	160	1,700	84	40	210	2,500	89
Stachybotrys	-	7	13	370	3	7	13	330	5
Torula	-	7	13	230	5	7	13	150	13
Seldom found growing indoors**									
Ascospores	213	13	110	2,200	67	13	110	1,800	73
Basidiospores	7,250	13	270	8,600	87	13	270	6,900	95
Oidium	-	7	13	170	9	7	13	200	20
Rusts	-	7	13	240	11	7	13	270	29
Smuts, Periconia, Myxomycetes	13	7	27	270	53	8	40	480	71
TOTAL SPORES/M3	8,490								

<sup>†</sup> The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 2.5% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

<sup>‡</sup> The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

<sup>\*</sup>The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. Cladosporium is one of the predominant spore types worldwide and is frequently present in high numbers. Penicillium/Aspergillus species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

<sup>\*\*</sup>These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

Client: Hygiene Technologies International, Inc.:

Northern California

C/O: Mr. Wes Frey

Date of Sampling: 02-28-2008

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

## MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 20802001-TM89outME:

Species detected	Outdoor sample spores/m3				Typical outdoor ranges			Freq.	
	<100	<100 1K 10K >100K		(North America)			%		
Ascospores				4	180	13 -	160	- 4,200	76
Basidiospores				7,	360	13 -	320	- 14,000	92
Cladosporium				1,	,330	40 -	530	- 8,500	95
Oidium					13	7 -	13	- 230	15
Other brown					13	7 -	13	- 93	35
Other colorless					13	7 -	13	- 140	7
Penicillium/Aspergillus types				1	107	27 -	210	- 2,600	85
Smuts, Periconia, Myxomycetes					27	7 -	40	- 760	70
Total				9,	,343				

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

**Location:** 20802001-TM90ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2222		dF: 8 Result: 0.1190 Critical value: 0.6190 Outside Similar: No	Score: 105 Result: Low	
Species	Detected			Spores/m3		
		<100	1K	10 <b>K</b>	>100K	
	Other brown				13	
	Total				13	

**Location:** 20802001-TM91ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2222	dF: 8 Result: 0.5952 Critical value: 0.6190 Outside Similar: No	Score: 101 Result: Low
Species	Detected		Spores/m3	
		<100 1K	10K	>100K
	Cladosporium			13
	Total			13

Client: Hygiene Technologies International, Inc.: Northern California

Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

C/O: Mr. Wes Frey

# MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM92ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM93ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)	
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low	
Species 1	Detected		Spores/m3		
		<100 1K	10K	>100K	
	None Detected			N/A	

**Location:** 20802001-TM94ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008

C/O: Mr. Wes Frey

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM95ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM96ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM97ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Northern California Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

# MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM98ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2222		dF: 8 Result: 0.5952 Critical value: 0.6190 Outside Similar: No		Score: 102 Result: Low
Species	Detected			Spo	res/m3	
		<100	1K		10K	>100K
	Cladosporium					40
	Total					40

**Location:** 20802001-TM99ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor	(indoor/outdoor)
Result: 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Resi	ılt: 0.2222	dF: 8 Result: 0.5952 Critical value: 0.619 Outside Similar: No	
Species 1	Detected			Spores/m3	
		<100	1K	10K	>100K
	Cladosporium				120
	Total				120

**Location:** 20802001-TM100ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Species Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Northern California Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM101ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2222		dF: 8 Result: 0.5952 Critical value: 0.6190 Outside Similar: No		Score: 101 Result: Low
Species	Detected			Spor	res/m3	
		<100	1K		10K	>100K
	Cladosporium					27
	Total					27

**Location:** 20802001-TM102ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Species Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM103ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Species Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM104ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2222		dF: 8 Result: 0.5952 Critical value: 0.6190 Outside Similar: No		Score: 101 Result: Low
Species	Detected			Spo	res/m3	
		<100	1K		10K	>100K
	Cladosporium					13
	Total					13

**Location:** 20802001-TM105ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Res	ult: 0.2222	dF: 8 Result: 0.59 Critical value: Outside Simil	0.6190	Score: 103 Result: Low
Species 1	Detected			Spores/n	n3	
		<100	1K		10K	>100K
	Cladosporium					53
	Total					53

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

<sup>\*\*</sup> An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

<sup>\*\*\*</sup> The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008

C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

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Client: Hygiene Technologies International, Inc.:

Northern California

C/O: Mr. Wes Frey

Date of Sampling: 02-28-2008

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

Outdoor Summary: 20802001-TM106outME:

Species detected	Outdoor sample spores/m3			Typical outdoor ranges		Freq.	
	<100	1K	10K	>100K	(North A	(merica)	<b>%</b>
Alternaria				27	7 - 27	- 390	55
Ascospores				213	] 13 - 160	- 4,200	76
Basidiospores				7,250	] 13 - 320	0 - 14,000	92
Cladosporium				747	40 - 530	- 8,500	95
Other brown				27	] 7 - 13	- 93	35
Penicillium/Aspergillus types				213	27 - 21	0 - 2,600	85
Smuts, Periconia, Myxomycetes				13	] 7 - 40	- 760	70
Total				8,490			

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

#### **Indoor Samples**

**Location:** 20802001-TM90ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.1429 Critical value: 0.6786 Outside Similar: No		Score: 105 Result: Low
Species	Detected			Spor	es/m3	
		<100	1K		10K	>100K
	Other brown					13
	Total					13

**Location:** 20802001-TM91ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio* (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500	dF: 7 Result: 0.5804 Critical value: 0.6786 Outside Similar: No	Score: 101 Result: Low
Species	Detected		Spores/m3	
		<100	X 10K	>100K
	Cladosporium			13
	Total			13

Client: Hygiene Technologies International, Inc.: Northern California

Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

C/O: Mr. Wes Frey

# MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM92ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected			
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM93ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Species Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM94ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008

C/O: Mr. Wes Frey

Date of Receipt: 02-29-2008

Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM95ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio**   Spearman rank   correlation***   (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	Result: 0.0000  dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM96ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species	Detected			
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM97ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Northern California Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

# MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM98ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.5804 Critical value: 0.6786 Outside Similar: No		Score: 102 Result: Low
Species	Detected			Spores/m3	3	
		<100	1K	10	K	>100K
	Cladosporium					40
	Total					40

**Location:** 20802001-TM99ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		(indoor/outdoor) correlation*** (indoor/outdoor)		(indoor/outdoor)
Result: 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.5804 Critical value: 0.678 Outside Similar: N		
Species 1	Detected			Spores/m3		
		<100	1K	10K	>100K	
	Cladosporium				120	
	Total				120	

**Location:** 20802001-TM100ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

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Client: Hygiene Technologies International, Inc.: Da Northern California Da

Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

C/O: Mr. Wes Frey

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM101ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.5804 Critical value: 0.6786 Outside Similar: No		Score: 102 Result: Low
Species	Detected			Spor	es/m3	
		<100	1K		10K	>100K
	Cladosporium					27
	Total					27

**Location:** 20802001-TM102ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species 1	Detected		Spores/m3	
		<100 1K	10K	>100K
	None Detected			N/A

**Location:** 20802001-TM103ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio**   Spearman rank   correlation***   (indoor/outdoor)			MoldSCOF (indoor/ou		
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.0000		dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A		Score: 1 Result: L	
Species	Detected				pores/m3		
		<100	1K		10K	>100K	
	None Detected						N/A

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

**Location:** 20802001-TM104ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)		Spearman rank correlation*** (indoor/outdoor)		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.5804 Critical value: 0.6786 Outside Similar: No		Score: 101 Result: Low
Species	Detected			Spor	es/m3	
		<100	1K		10K	>100K
	Cladosporium					13
	Total					13

**Location:** 20802001-TM105ME

% of outdoor total spores/m3	Friedman chi- square* (indoor variation)	Agreement ratio** (indoor/outdoor)				correlation***		MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: 15 Result: 5.9338 Critical value: 24.9958 Inside Similar: Yes	Result: 0.2500		dF: 7 Result: 0.5804 Critical value: 0.6786 Outside Similar: No		Score: 103 Result: Low		
Species	Detected			Spores/m3	3			
		<100	1K	10	K	>100K		
	Cladosporium					53		
	Total					53		

<sup>\*</sup> The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

<sup>\*\*</sup> An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

<sup>\*\*\*</sup> The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008

C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSTAT<sup>TM</sup>: Supplementary Statistical Spore Trap Report

\*\*\*\* MoldSCORE<sup>TM</sup> is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

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Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

# **MoldSCORE**<sup>TM</sup>: **Spore Trap Report Outdoor Sample:** 20802001-TM89outME

Fungi Identified	Οι	ıtdo	or	san	ıple	e s	por	·es/	m3	Raw	Spores/
_	<10	0	1	K		1	0K	>	100F	count	m3
Generally able to grow indoors*											
Alternaria										ND	< 13
Bipolaris/Drechslera group										ND	< 13
Chaetomium										ND	< 13
Cladosporium										25	1,330
Curvularia										ND	< 13
Nigrospora										ND	< 13
Other brown										1	13
Other colorless										1	13
Penicillium/Aspergillus types†										2	107
Stachybotrys										ND	< 13
Torula										ND	< 13
Seldom found growing indoors**											
Ascospores††										9	480
Basidiospores††										138	7,360
Oidium										1	13
Rusts										ND	< 13
Smuts, Periconia, Myxomycetes††										2	27
Total											9,343

**Location:** 20802001-TM90ME

Fungi Identified	In	do	or	sa	mj	ple	S	poi	res	/n	n3	Raw	Spores/
	<100	)		1K				10K		>	1001	count	m3
Generally able to grow indoors*													
Alternaria												ND	< 13
Bipolaris/Drechslera group												ND	< 13
Chaetomium												ND	< 13
Cladosporium												ND	< 13
Curvularia												ND	< 13
Nigrospora												ND	< 13
Other brown												1	13
Penicillium/Aspergillus types†												ND	< 13
Stachybotrys												ND	< 13
Torula												ND	< 13
Seldom found growing indoors**													
Ascospores††												ND	< 13
Basidiospores††												ND	< 13
Rusts												ND	< 13
Smuts, Periconia, Myxomycetes††												ND	< 13
Total													13

MoldSCORE; 100 200 300 Score								
			100					
			100					
			100					
			100					
			100					
			100					
			105					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
Fina	l MoldSCC	RE	105					

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Re: 20802001 Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM91ME

Fungi Identified	Indo	or	sam	ple s	spore	es/n	13	Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								1	13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									13

MoldSCORE:									
	100								
	100								
	100								
	101								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
Final MoldSCORE	101								

**Location:** 20802001-TM92ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE; 100 200 300 Score								
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Fina	100								

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM93ME

Fungi Identified	Indo	or	sam	ple	spore	es/n	13	Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

100	MoldSC									
100	200	300	Score							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
Fin	100									

**Location:** 20802001-TM94ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE; 200 300 Score							
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
Fina	100							

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM95ME

Fungi Identified	Indo	or	sam	ple	spor	es/r	n3	Raw	Spores/
	<100		1K		10K	>	100	K count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††		$\prod$						ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

MoldSCORE: 100 200 300 Scor					
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
Final MoldSCORE	100				

**Location:** 20802001-TM96ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

MoldSCORE; 100 200 300 Score							
	200 300						
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	100						

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

# **MoldSCORE**<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM97ME

Fungi Identified	Indoor sample spores/m3							Raw	Spores/
	<100		1K		10K	>1	00K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

MoldSCORE: 100 200 300 Scor					
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
	100				
Final MoldSCORE	100				

**Location:** 20802001-TM98ME

Fungi Identified	Ind	oor sa	mple spo	res/m3	Raw	Spores/
	<100	1K	10F	>1001	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					3	40
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						40

100	MoldSCORE; 100 200 300 Score						
			100				
			100				
			100				
			102				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	102						

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Re: 20802001 Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM99ME

Fungi Identified	Indoor sample spores/m3							Raw	Spores/
	<100		1K		10K	>	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								9	120
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									120

MoldSCORE:	Score
	100
	100
	100
	107
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	107

**Location:** 20802001-TM100ME

Fungi Identified	Inde	oor san	Raw	Spores/		
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria	Ш				ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE; 100 200 300 Score					
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
			100			
Fina	100					

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

# **MoldSCORE**<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM101ME

Fungi Identified	Indo	or samp	s/m3	Raw	Spores/	
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					2	27
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total		•				27

MoldSCORE; 200 300 Score							
	100						
	100						
	100						
	101						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
Final MoldSCORI	E 101						

**Location:** 20802001-TM102ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE; 100 200 300 Score								
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Fina	al MoldSC(	ORE	100						

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

MoldSCORETM: Spore Trap Report

**Location:** 20802001-TM103ME

Fungi Identified	Indoor sam	Indoor sample spores/m3						
	<100 1K	10K	>100K	count	m3			
Generally able to grow indoors*								
Alternaria				ND	< 13			
Bipolaris/Drechslera group				ND	< 13			
Chaetomium				ND	< 13			
Cladosporium				ND	< 13			
Curvularia				ND	< 13			
Nigrospora				ND	< 13			
Penicillium/Aspergillus types†				ND	< 13			
Stachybotrys				ND	< 13			
Torula				ND	< 13			
Seldom found growing indoors**								
Ascospores††				ND	< 13			
Basidiospores††				ND	< 13			
Rusts				ND	< 13			
Smuts, Periconia, Myxomycetes††				ND	< 13			
Total					N/A			

100 <b>MoldSCORE</b> : 200 300	
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	100

**Location:** 20802001-TM104ME

Fungi Identified	Ind	oor s	ample	spor	es/m3	Raw	Spores/
	<100	1	K	10K	>1001	count	m3
Generally able to grow indoors*							
Alternaria						ND	< 13
Bipolaris/Drechslera group						ND	< 13
Chaetomium						ND	< 13
Cladosporium						1	13
Curvularia						ND	< 13
Nigrospora						ND	< 13
Penicillium/Aspergillus types†						ND	< 13
Stachybotrys						ND	< 13
Torula						ND	< 13
Seldom found growing indoors**							
Ascospores††						ND	< 13
Basidiospores††						ND	< 13
Rusts						ND	< 13
Smuts, Periconia, Myxomycetes††						ND	< 13
Total							13

100	MoldSCORE; 100 200 300 Score								
			100						
			100						
			100						
			101						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Fina	l MoldSCC	RE	101						

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSCORE<sup>TM</sup>: Spore Trap Report **Location:** 20802001-TM105ME

Fungi Identified	Indo	Indoor sample spores/m3							Spores/
	<100		ΙK		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								4	53
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts						Ш		ND	< 13
Smuts, Periconia, Myxomycetes††						П		ND	< 13
Total					·				53

MoldSCORE; 100 200 300 Score							
	100						
	100						
	100						
	103						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
Final MoldSCORE	E 103						
·							

<sup>\*</sup>The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

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<sup>\*\*</sup>These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

<sup>†</sup>The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

<sup>††</sup>Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

<sup>‡</sup>Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Northern California C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

## MoldSCORETM: Spore Trap Report

Outdoor Sample: 20802001-TM106outME

Fungi Identified	Outdoor sample spores/m3							/m3	Raw	Spores/	
_	<10	)		1K			10K	:	>100 <b>I</b>	count	m3
Generally able to grow indoors*											
Alternaria										2	27
Bipolaris/Drechslera group						Ш				ND	< 13
Chaetomium										ND	< 13
Cladosporium										14	747
Curvularia										ND	< 13
Nigrospora										ND	< 13
Other brown										2	27
Penicillium/Aspergillus types†										4	213
Stachybotrys										ND	< 13
Torula										ND	< 13
Seldom found growing indoors**											
Ascospores††										4	213
Basidiospores††										136	7,250
Rusts						$\prod$				ND	< 13
Smuts, Periconia, Myxomycetes††										1	13
Total											8,490

**Location:** 20802001-TM90ME

Fungi Identified	Indoor sample spores/m3								Raw	Spores/
	<100		1K		1	10K	:	>100	count	m3
Generally able to grow indoors*										
Alternaria									ND	< 13
Bipolaris/Drechslera group									ND	< 13
Chaetomium									ND	< 13
Cladosporium									ND	< 13
Curvularia									ND	< 13
Nigrospora									ND	< 13
Other brown									1	13
Penicillium/Aspergillus types†									ND	< 13
Stachybotrys									ND	< 13
Torula									ND	< 13
Seldom found growing indoors**										
Ascospores††									ND	< 13
Basidiospores††									ND	< 13
Rusts									ND	< 13
Smuts, Periconia, Myxomycetes††									ND	< 13
Total										13

100	MoldSC 200	ORE: 300	Score
			100
			100
			100
			100
			100
			100
			105
			100
			100
			100
			100
			100
			100
			100
Fina	al MoldSC	ORE	105

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Re: 20802001 Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM91ME

Fungi Identified	Indo	Indoor sample spores/m3						Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								1	13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									13

MoldSCORE:	
	100
	100
	100
	101
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	101

**Location:** 20802001-TM92ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

MoldSCORE;							
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	100						

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM93ME

Fungi Identified	Indo	Indoor sample spores/m3						Raw	Spores/
	<100		1K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

100	MoldSCORE; 200 300 Score							
100	200	300	Score					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
			100					
Fin	al MoldSC	ORE	100					
	•		_					

**Location:** 20802001-TM94ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE: 300 Score						
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	al MoldSC	ORE	100				

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

## MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM95ME

Fungi Identified	Indo	Indoor sample spores/m3						Raw	Spores/
	<100		1K		10K	>	100	K count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††		$\prod$						ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

MoldSCORE; 300 Score							
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
	100						
Final MoldSCORE	100						

**Location:** 20802001-TM96ME

Fungi Identified	Ind	oor sai	mple spor	es/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

MoldSCORE; 100 200 300 Score							
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	l MoldSC	ORE	100				

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

# **MoldSCORE**<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM97ME

Fungi Identified	Indo	or	samp	le s	spore	s/m	13	Raw	Spores/
	<100		1K		10K	>1	00K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

MoldSCORE; 300 Score									
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
Final MoldSCORE	100								

**Location:** 20802001-TM98ME

Fungi Identified	Ind	oor sa	mple spo	res/m3	Raw	Spores/
	<100	1K	10F	>1001	count	m3
Generally able to grow indoors*						
Alternaria					ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					3	40
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						40

100	Score								
	100 200 300								
			100						
			100						
			100						
			102						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Fina	al MoldSC	ORE	102						

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Re: 20802001 Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

MoldSCORE<sup>TM</sup>: Spore Trap Report

**Location:** 20802001-TM99ME

Fungi Identified	Indo	Indoor sample spores/m3						Raw	Spores/
	<100		1K		10K	>	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								9	120
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									120

MoldSCORE:	Score
	100
	100
	100
	107
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	107

**Location:** 20802001-TM100ME

Fungi Identified	Inde	oor san	aple spore	s/m3	Raw	Spores/
	<100	1K	10K	>100K	count	m3
Generally able to grow indoors*						
Alternaria	Ш				ND	< 13
Bipolaris/Drechslera group					ND	< 13
Chaetomium					ND	< 13
Cladosporium					ND	< 13
Curvularia					ND	< 13
Nigrospora					ND	< 13
Penicillium/Aspergillus types†					ND	< 13
Stachybotrys					ND	< 13
Torula					ND	< 13
Seldom found growing indoors**						
Ascospores††					ND	< 13
Basidiospores††					ND	< 13
Rusts					ND	< 13
Smuts, Periconia, Myxomycetes††					ND	< 13
Total						N/A

100	MoldSCORE;									
	230 300									
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
			100							
Fina	al MoldSC	ORE	100							

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

# $MoldSCORE^{TM}: Spore\ Trap\ Report$

**Location:** 20802001-TM101ME

Fungi Identified	Inde	Indoor sample spores/m3						Raw	Spores/
	<100		1K		10K	>	100	<b>count</b>	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								2	27
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									27

100 <b>MoldSCORE</b> 200 300	
	100
	100
	100
	102
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	102

**Location:** 20802001-TM102ME

Fungi Identified	Ind	oor	samj	ple	spore	es/m	13	Raw	Spores/
	<100		1 <b>K</b>		10K	>1	00K	count	m3
Generally able to grow indoors*									
Alternaria				Ш				ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								ND	< 13
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts								ND	< 13
Smuts, Periconia, Myxomycetes††								ND	< 13
Total									N/A

100	MoldSCORE: Score								
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
			100						
Fina	al MoldSC	ORE	100						

Client: Hygiene Technologies International, Inc.:

Northern California C/O: Mr. Wes Frey Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Date of Report: 03-05-2008

Re: 20802001

MoldSCORETM: Spore Trap Report

**Location:** 20802001-TM103ME

Fungi Identified	Indoor sam	Raw	Spores/		
	<100 1K	10K	>100K	count	m3
Generally able to grow indoors*					
Alternaria				ND	< 13
Bipolaris/Drechslera group				ND	< 13
Chaetomium				ND	< 13
Cladosporium				ND	< 13
Curvularia				ND	< 13
Nigrospora				ND	< 13
Penicillium/Aspergillus types†				ND	< 13
Stachybotrys				ND	< 13
Torula				ND	< 13
Seldom found growing indoors**					
Ascospores††				ND	< 13
Basidiospores††				ND	< 13
Rusts				ND	< 13
Smuts, Periconia, Myxomycetes††				ND	< 13
Total					N/A

100 <b>MoldSCORE</b> : 200 300	
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
	100
Final MoldSCORE	100

**Location:** 20802001-TM104ME

Fungi Identified	Ind	oor s	ample	spor	es/m3	Raw	Spores/
	<100	1	K	10K	>1001	count	m3
Generally able to grow indoors*							
Alternaria						ND	< 13
Bipolaris/Drechslera group						ND	< 13
Chaetomium						ND	< 13
Cladosporium						1	13
Curvularia						ND	< 13
Nigrospora						ND	< 13
Penicillium/Aspergillus types†						ND	< 13
Stachybotrys						ND	< 13
Torula						ND	< 13
Seldom found growing indoors**							
Ascospores††						ND	< 13
Basidiospores††						ND	< 13
Rusts						ND	< 13
Smuts, Periconia, Myxomycetes††						ND	< 13
Total							13

MoldSCORE; 100 200 300 Score							
			100				
			100				
			100				
			101				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
			100				
Fina	l MoldSCC	RE	101				

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Northern California Date of Receipt: 02-29-2008 C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### MoldSCORE<sup>TM</sup>: Spore Trap Report **Location:** 20802001-TM105ME

Fungi Identified	Indo	Indoor sample spores/m3						Raw	Spores/
	<100		١K		10K	>1	100K	count	m3
Generally able to grow indoors*									
Alternaria								ND	< 13
Bipolaris/Drechslera group								ND	< 13
Chaetomium								ND	< 13
Cladosporium								4	53
Curvularia								ND	< 13
Nigrospora								ND	< 13
Penicillium/Aspergillus types†								ND	< 13
Stachybotrys								ND	< 13
Torula								ND	< 13
Seldom found growing indoors**									
Ascospores††								ND	< 13
Basidiospores††								ND	< 13
Rusts						П		ND	< 13
Smuts, Periconia, Myxomycetes††						П		ND	< 13
Total									53

MoldSCORE‡ 100 200 300 Score									
	100								
	100								
	100								
	103								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
	100								
Final MoldSCORE	103								

<sup>\*</sup>The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

EMLab ID: 394505, Page 9 of 9

<sup>\*\*</sup>These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

<sup>†</sup>The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

<sup>††</sup>Most of these spore types are not seen with culturable methods (Anderson sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores.

<sup>‡</sup>Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.



Report for:

Mr. Wes Frey Hygiene Technologies International, Inc.: Northern California 3127 Bowen Island Street West Sacramento, CA 95691

Regarding: Project: 20802001

EMĹ ID: 394505

Approved by:

Lab Manager Magzoub Ismail Dates of Analysis: Culturable air fungi (Incl. Asp spp.): 03-05-2008 Spore trap analysis: 03-05-2008

Project SOPs: Culturable air fungi (Incl. Asp spp.) (I100002), Spore trap analysis (I100000)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-28-2008

Northern California
C/O: Mr. Wes Frey

Date of Sampling. 02-28-200
Date of Receipt: 02-29-2008
Date of Report: 03-05-2008

Re: 20802001

#### **CULTURABLE AIR FUNGI REPORT**

Location:	20802001- VM39outME		20802001- VM40ME		20802001- VM41ME		20802001- VM42ME		20802001- VM43ME	
Comments (see below)	A		None		None		None		None	
Lab ID-Version‡:	1732115-1		1732116-1		1732117-1		1732118-1		1732119-1	
	raw ct.	cfu*/m3	raw ct.	cfu*/m3	raw ct.	cfu*/m3	raw ct.	cfu*/m3	raw ct.	cfu*/m3
Acremonium										
Alternaria										
Aspergillus flavus										
Aspergillus fumigatus										
Aspergillus nidulans										
Aspergillus niger										
Aspergillus ochraceus										
Aspergillus versicolor										
Aureobasidium										
Basidiomycetes										
Bipolaris/Drechslera group										
Botrytis										
Chaetomium										
Cladosporium	8	141	2	35	1	18				
Curvularia										
Epicoccum										
Fusarium										
Non-sporulating fungi										
Paecilomyces										
Penicillium										
Phoma										
Rhizopus										
Stachybotrys chartarum										
Trichoderma	1	18								
Ulocladium		_								
Yeasts			1	18						
Positive Hole	400		400		400		400		400	
Sample volume (liters)	56.6		56.6		56.6		56.6		56.6	
TOTAL CFU*/M3		159		53		18		< 18		< 18

\* cfu = colony forming units Positive hole correction chart used for all calculations

**Comments:** A) The sample was overgrown with a *Trichoderma* species which may have reduced or eliminated the presence of other fungi.

Note: Interpretation is left to the company and/or persons who conducted the field work. Variation is an inherent part of biological sampling. The presence or absence of a few genera in small numbers should not be considered abnormal.

NORMAL SPORE LEVELS: Indoor spore levels usually average 30 to 80% of the outdoor spore level at the time of sampling, with the same general distribution of spore types. Filtered air, air-conditioned air, or air remote from outside sources may average 5 to 15% of the outside air at the time of sampling. (These percentages are guidelines, only. A major factor is the accessibility of outdoor air. A residence with open doors and windows and heavy foot traffic may average 95% of the outdoor level while high rise office buildings with little air exchange may average 2%. Dusty interiors may exceed 100% of the outdoors to some degree, but will still mirror the outdoor distribution of spore types.)

PROBLEM INTERIORS: A substantial increase of one or two spore types which are inconsistent with and non-reflective of the outside

distribution of spore types is usually indicative of an indoor reservoir of mold growth.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

5473 Kearny Villa Road, Suite 130, San Diego, CA 92123 (858) 569-5800 Fax (858) 569-5806 www.emlab.com

Client: Hygiene Technologies International, Inc.:

Date of Sampling: 02-28-2008 Date of Receipt: 02-29-2008 Northern California C/O: Mr. Wes Frey Date of Report: 03-05-2008

Re: 20802001

#### **CULTURABLE AIR FUNGI REPORT**

Location:		02001- 44ME		02001- 45ME		02001- 46ME		02001- 7outME
Comments (see below)	N	None		lone	None		None	
Lab ID-Version‡:	173	2120-1	1732	2121-1	1732	2122-1	2-1 1732123-1	
	raw ct.	cfu*/m3	raw ct.	cfu*/m3	raw ct.	cfu*/m3	raw ct.	cfu*/m3
Acremonium								
Alternaria							1	18
Aspergillus flavus								
Aspergillus fumigatus	1	18						
Aspergillus nidulans								
Aspergillus niger								
Aspergillus ochraceus								
Aspergillus versicolor								
Aureobasidium							1	18
Basidiomycetes								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium					1	18	21	389
Curvularia								
Epicoccum							1	18
Fusarium								
Non-sporulating fungi								
Paecilomyces								
Penicillium					1	18	1	18
Phoma								
Rhizopus								
Stachybotrys chartarum								
Trichoderma								
Ulocladium								
Yeasts								
Positive Hole	400		400		400		400	
Sample volume (liters)	56.6		56.6		56.6		56.6	
* cfu = colony forming units		18		< 18		36		461

<sup>\*</sup> cfu = colony forming units

Positive hole correction chart used for all calculations

**Comments:** 

Note: Interpretation is left to the company and/or persons who conducted the field work. Variation is an inherent part of biological sampling. The presence or absence of a few genera in small numbers should not be considered abnormal.

NORMAL SPORE LEVELS: Indoor spore levels usually average 30 to 80% of the outdoor spore level at the time of sampling, with the same general distribution of spore types. Filtered air, air-conditioned air, or air remote from outside sources may average 5 to 15% of the outside air at the time of sampling. (These percentages are guidelines, only. A major factor is the accessibility of outdoor air. A residence with open doors and windows and heavy foot traffic may average 95% of the outdoor level while high rise office buildings with little air exchange may average 2%. Dusty interiors may exceed 100% of the outdoors to some degree, but will still mirror the outdoor distribution of spore types.)

PROBLEM INTERIORS: A substantial increase of one or two spore types which are inconsistent with and non-reflective of the outside distribution of spore types is usually indicative of an indoor reservoir of mold growth.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.



3625 Del Amo Boulevard, Sulte 180 Torrance, California 90503-1643 (310) 370-8370 (310) 370-2474 FAX

www.hyglenetech.com

Project Number/Purcha		0802001	Date Submitted:  Turnaround Required: Standar 1			
Lab Destination: EML Lab Contact:						
<del></del>	VOLUME	MEDIA	ANALYSIS REQUESTED			
20802001-TM84000		Alaxenco D	Total Wold Assessment			
1 - THIGO ME	ľ					
-TM 9/ME						
-TMAZME						
-TM93ME						
-Tmayne			<u> </u>			
-TW95ME	ļ <u> </u>		<u> </u>			
-TM96ME		<del>                                     </del>				
- Tm97m	1 1		<u> </u>			
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3625 Del Amo Soulevard, Suite 190 Torranca, California 90503-1643 (310) 370-8370 (310) 370-2474 FAX www.hygienetech.com

		<u> </u>				
Project Number/Pur	chase Order:	20802001	Date Submitted:			
			Turnaround Required: Standard.			
Project Contact: Lab Destination:	EML		Lab Contact:			
<del></del>	VOLUME	MEDIA	ANALYSIS REQUESTED			
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VTMID	booke V	\ \d	V .			
-vm3	VM340ATOME 56.6L MED VIable France ID					
-VM 40ME						
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3. Relinquished by: Received by:  Please include signature, date, and time						
Lab Use Only:						
Lan Cac Only:			30F175			
			St			
1			•			



Report for:

Mr. Wes Frey Hygiene Technologies International, Inc.: Northern California 3127 Bowen Island Street West Sacramento, CA 95691

Regarding: Project: 20802001

EML ID: 392858

Approved by:

Lab Manager

Dr. Kamashwaran Ramanathan

Dates of Analysis:

Direct microscopic exam (Qualitative): 02-29-2008

Spore trap analysis: 02-29-2008

Project SOPs: Direct microscopic exam (Qualitative) (I100005), Spore trap analysis (I100000)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

11720 North Creek Pkwy N, #400, Bothell, WA 98011 (650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.: Date of Sampling: 02-22-2008 Northern California Date of Receipt: 02-26-2008

C/O: Mr. Wes Frey Date of Report: 02-29-2008 Re: 20802001

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		02001- 1CCME		02001- 2CCME		02001- 3CCME		02001- 4CCME
Comments (see below)	None			Vone		Vone	None	
Lab ID-Version:		5716-1		5717-1		5718-1	1725719-1	
Lab ID- Version.						_		
A.1.	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium			4	213	2	107		
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown								
Other colorless								
Penicillium/Aspergillus types†	1	53					2	107
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	3+		3+		3+		3+	
Hyphal fragments/m3	< 13		13		27		< 13	
Pollen/m3	< 13		13		< 13		< 13	
Skin cells (1-4+)	1+		2+		1+		1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		53		213		107		107

#### **Comments:**

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi.

Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

11720 North Creek Pkwy N, #400, Bothell, WA 98011 (650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.:

Northern California

C/O: Mr. Wes Frey

Date of Sampling: 02-22-2008

Date of Receipt: 02-26-2008

Date of Report: 02-29-2008

Re: 20802001

#### SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:		02001- 5CCME		02001- 6CCME		02001- 7CCME		02001- 8CCME
Comments (see below)	A		N	lone	N	Vone	None	
Lab ID-Version‡:	172	5720-1	172	5721-1	172	5722-1	172	5723-1
	raw ct.	spores/m3						
Alternaria				_		_		
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*	1	53						
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	38	547	2	107			2	107
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown					1	13		
Other colorless								
Penicillium/Aspergillus types†			1	53				
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*					12	160		
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	3+		3+		3+		3+	
Hyphal fragments/m3	< 13		13		13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	1+		1+		3+		2+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		600		160		173		107

Comments: A) 37 of the raw count Cladosporium spores were present as a single clump.

<sup>\*</sup> Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.

<sup>†</sup> The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

<sup>††</sup>Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.

The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

11720 North Creek Pkwy N, #400, Bothell, WA 98011 (650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Hygiene Technologies International, Inc.: Northern California

Northern California C/O: Mr. Wes Frey Re: 20802001 Date of Sampling: 02-22-2008 Date of Receipt: 02-26-2008 Date of Report: 02-29-2008

#### DIRECT MICROSCOPIC EXAMINATION REPORT

(Wet Mount)

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression				
Lab ID-Version‡: 1	Lab ID-Version‡: 1725708-1: Swab sample 20802001-S01ME							
Moderate	Very few	< 1+ Cladosporium species (spores, hyphae)	None	Minimal mold growth				
Lab ID-Version: 1725709-1: Swab sample 20802001-S02ME								
Moderate	None	2+ colorless spores typical of Penicillium / Aspergillus (spores)	None	Mold growth				
Lab ID-Version: 1725710-1: Swab sample 20802001-S03ME								
Moderate	Few	None	None	Normal trapping				
Lab ID-Version: 1725711-1: Swab sample 20802001-S04ME								
Moderate	Very few	1+ colorless spores typical of Penicillium / Aspergillus (spores)	None	Mold growth				
Lab ID-Version: 17	725712-1: Swab sam	pple 20802001-S05ME						
Scant	Very few	None	None	Normal trapping				
Lab ID-Version: 17	725713-1: Swab sam	nple 20802001-S06ME						
Moderate	Variety	None	None	Normal trapping				
Lab ID-Version: 1725714-1: Swab sample 20802001-S07ME								
Heavy	Variety	< 1+ Penicillium species (spores, hyphae, conidiophores)	None	Minimal mold growth				
Lab ID-Version: 17	Lab ID-Version: 1725715-1: Swab sample 20802001-S08ME							
Moderate	Variety	None	None	Normal trapping				
† A "Version" greater than 1 indicates amended data.								

<sup>‡</sup> A "Version" greater than 1 indicates amended data.



3625 Oel Amo Boulevard, Sulte 180 Torrance, California 90503-1643 (310) 370-8370 (310) 370-2474 FAX

Project Number/Purcha	ise Order: <u>Jo</u>	102001	Date Submitted:		
Project Contact:U	Dec Frey	<u>_</u>	Turnaround Required: Standard		
Lab Destination:	EM (ab	·	Lab Contact:		
SAMPLE ID	VOLUME	MEDIA	ANALYSIS REQUESTED		
20802001-SOLME	N/A	Luch	ausface fungi ID qualitative		
-SORME	4				
-502MB		<u> </u>			
-SOAME					
-SOSME					
-SOGME	<u></u>				
-507ME	<u> </u>				
- SORME	<u> </u>	- V	V		
-TMOICCME	75L	allergenco D	Total Gungi ID		
<u>ТМ ОДССМЁ</u>	1	0	0 /		
- TM OSCOME		<u>                                     </u>			
-TMOACCME		<u> </u>			
-TMOSCOM	1				
TMOGREM		<u> </u>			
- TMOTIFICALE					
- THIORICEME		<u> </u>			
Special Instructions:					
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Lab Use Only:			為		
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Report for:

Mr. Wes Frey Hygiene Technologies International, Inc.: Northern California 3127 Bowen Island Street West Sacramento, CA 95691

Regarding: Project: 20802001

EMĹ ID: 391390

Approved by:

Lab Manager Magzoub Ismail Dates of Analysis:
Direct microscopic exam (Qualitative): 02-26-2008

Project SOPs: Direct microscopic exam (Qualitative) (I100005)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

1010 N Central Avenue, Glendale, CA 91202 (858) 569-5800 Fax (858) 569-5806 www.emlab.com

Client: Hygiene Technologies International, Inc.: Northern California Date of Sampling: 02-20-2008 Date of Receipt: 02-21-2008 Date of Report: 02-26-2008

C/O: Mr. Wes Frey Re: 20802001

### DIRECT MICROSCOPIC EXAMINATION REPORT

(Wet Mount)

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 1	718117-1: Tape sar	nple 20802001-TL109ME		
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	'18118-1: Tape sam	ple 20802001-TL110ME		1
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	'18119-1: Tape sam	ple 20802001-TL111ME		
Moderate	None	None	None	No mold spores detected
Lab ID-Version: 17	18120-1: Tape sam	ple 20802001-TL112ME		
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 17	/18121-1: Tape sam	ple 20802001-TL113ME		
Light	Very few	None	None	Normal trapping
Lab ID-Version: 17	/18122-1: Tape sam	ple 20802001-TL114ME		
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 17	/18123-1: Tape sam	ple 20802001-TL115ME		
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	/18124-1: Tape sam	ple 20802001-TL116ME		
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	'18125-1: Tape sam	ple 20802001-TL117ME		
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	18126-1: Tape sam	ple 20802001-TL118ME		
Light	None	None	None	No mold spores detected
Lab ID-Version: 17	18127-1: Tape sam	ple 20802001-TL119ME		
Light	Very few	None	None	Normal trapping
				I .

EMLab ID: 391390, Page 1 of 4

Description	neral ession								
Moderate	CSSIOII								
Lab ID-Version: 1718129-1: Tape sample 20802001-TL121ME         None         None         No mol determined           Lab ID-Version: 1718130-1: Tape sample 20802001-TL122ME         None         None         None         None         No mol determined           Lab ID-Version: 1718131-1: Tape sample 20802001-TL123ME         Light         Very few         None         None         None         Normal           Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME         Light         None         None         No mol determined           Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME         Light         None         None         No mol determined           Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME         None         None         No mol determined           Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME         None         None         No mol determined									
Light         None         None         None         No mol determent           Lab ID-Version: 1718130-1: Tape sample 20802001-TL122ME         None         None         No mol determent           Lab ID-Version: 1718131-1: Tape sample 20802001-TL123ME         None         None         Normal           Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME         None         None         No mol determent           Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME         None         None         No mol determent           Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME         None         No mol determent         No mol determent           Light         None         None         No mol determent         No mol determent           Light         None         None         No mol determent	trapping								
Light         None         None         None         No mol determent           Lab ID-Version: 1718130-1: Tape sample 20802001-TL122ME         None         None         No mol determent           Lab ID-Version: 1718131-1: Tape sample 20802001-TL123ME         None         None         Normal           Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME         None         None         No mol determent           Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME         None         None         No mol determent           Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME         None         No mol determent         No mol determent           Light         None         None         No mol determent         No mol determent           Light         None         None         No mol determent	Lab ID-Version: 1718129-1: Tape sample 20802001-TL121ME								
Light None None None None None None No mol determined to the Lab ID-Version: 1718131-1: Tape sample 20802001-TL123ME Light Very few None None None None None No mol determined to the Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME Light None None None None No mol determined to the Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME	ld spores ected								
Lab ID-Version: 1718131-1: Tape sample 20802001-TL123ME   Light   Very few   None   None   None   None   None   None   Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME   Light   None   None   None   None   None   Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME   Light   None   None   None   None   None   Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME   Light   None   None	Lab ID-Version: 1718130-1: Tape sample 20802001-TL122ME								
Light Very few None None None None Normal  Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME  Light None None None None No mol dete  Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME  Light None None None No mol dete  Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME  Light None None No mol dete	ld spores ected								
Light Very few None None None None Normal  Lab ID-Version: 1718132-1: Tape sample 20802001-TL124ME  Light None None None None No mol dete  Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME  Light None None None No mol dete  Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME  Light None None No mol dete									
Light None None None None None No mol determined to the Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME Light None None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME	l trapping								
Light None None None None None No mol determined to the Lab ID-Version: 1718133-1: Tape sample 20802001-TL125ME Light None None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME Light None None No mol determined to the Lab ID-Version: 1718134-1: Tape sample 20802001-TL126ME									
Light None None None None None No mol dete	ld spores ected								
Light None None None None None No mol dete									
Light None None None No mol dete	ld spores ected								
Light None None None No mol dete									
V 1 VD V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ld spores ected								
Lab ID-Version: 1718135-1: Tape sample 20802001-TL127ME									
Light None None None No mol	ld spores ected								
Lab ID-Version: 1718136-1: Tape sample 20802001-TL128ME									
Scant None None None No mol	ld spores ected								
Lab ID-Version: 1718137-1: Tape sample 20802001-TL129ME									
	ld spores ected								
Lab ID-Version: 1718138-1: Tape sample 20802001-TL130ME									
	l trapping								
Lab ID-Version: 1718139-1: Tape sample 20802001-TL131ME									
Light None None None No mol	ld spores ected								
Lab ID-Version: 1718140-1: Tape sample 20802001-TL132ME	Lab ID-Version: 1718140-1: Tape sample 20802001-TL132ME								
Light None None None No mol dete	I								

Background Debris and/or	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or	Other Comments††	General Impression				
Description	Spores Tresent	sporulating structures†	Comments	Impression				
Lab ID-Version‡: 1	718141-1: Tape sar	mple 20802001-TL133ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	718142-1: Tape sam	ple 20802001-TL134ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	718143-1: Tape sam	ple 20802001-TL135ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	718144-1: Tape sam	ple 20802001-TL136ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	Lab ID-Version: 1718145-1: Tape sample 20802001-TL137ME							
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 1718146-1: Tape sample 20802001-TL138ME								
Light	None	None	None	No mold spores detected				
Lab ID-Version: 17	718147-1: Tape sam	ple 20802001-TL139ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	718148-1: Tape sam	ple 20802001-TL40ME						
Light	None	None	None	No mold spores detected				
Lab ID-Version: 17	718149-1: Tape sam	ple 20802001-TL141ME						
Moderate	Very few	None	None	Normal trapping				
Lab ID-Version: 17	718150-1: Tape sam	ple 20802001-TL142ME						
Scant	None	None	None	No mold spores detected				
Lab ID-Version: 17	Lab ID-Version: 1718151-1: Tape sample 20802001-TL143ME							
Light	None	None	None	No mold spores detected				
Lab ID-Version: 17	718152-1: Tape sam	ple 20802001-TL144ME		1				
Light	None	None	None	No mold spores detected				
Lab ID-Version: 17	718153-1: Tape sam	ple 20802001-TL145ME						
Light	Very few	None	None	Normal trapping				

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression			
Lab ID-Version‡: 1718154-1: Tape sample 20802001-TL146ME							
Light	None	None	None	No mold spores detected			
Lab ID-Version: 1718155-1: Tape sample 20802001-TL147ME							
Light	Very few	None	None	Normal trapping			
Lab ID-Version: 1718156-1: Tape sample 20802001-TL148ME							
Moderate	Very few	None	None	Normal trapping			

<sup>‡</sup> A "Version" greater than 1 indicates amended data.

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Project Number/Purcha	se Order: 208	102.001	Date Submitted: 2/2//08			
Project Contact: Wes Frey Turnaround Required: 5torn dayed						
Lab Destination: Lab Contact:						
SAMPLE ID	VOLUME MEDIA ANALYSIS REQUESTED					
20802001-TLIEGHE	N/A	Bio Tape	Surface Jung: ID			
-THIDINE		'				
-TI JIIME						
-TL112ME			<u> </u>			
- TLII3ME			<u> </u>			
-TI HYME						
-TL 115MF						
-TLII6ME						
	12-11					
- DUSME		<del>                                     </del>				
- Thiame		<u> </u>	<u> </u>			
- TL120MP	<del>                                     </del>	<del>                                     </del>				
-7L121MF	7	<del>                                     </del>				
- [L127M]		<del>                                     </del>				
- 11123ME		\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \				
V -TLIZYME	<u> </u>	<u>  4</u>				
Special Instructions:						
			· · · · · · · · · · · · · · · · · · ·			
1. Sampled by: Makk, Em 2/20/09 17:00 Received by: 44 2/20/08 500						
2. Relinquished by: 91 2 21 08 7:00 Received by:						
3. Relinquished by: Received by: Fo22208/100						
Please include signature, date, and time						
Lab Use Only:		;	36126			
			$\nabla$			
			<i>5</i>			



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Project Number/Purchas	e Order: 208	02.00	Date Submitted: 2/2//08		
Project Contact: Was Frey			Turnaround Required: Standard		
Lab Destination:	,		Lab Contact:		
	VOLUME	MEDIA	ANALYSIS REQUESTED		
20802001 -TL125ME		Bio Tape	Sarface Fring: ID		
1 -TL126MP		1	- Committee of the comm		
1 ' ' '	<del> </del>	.			
- TL127#F	\V	.,,			
- TLIZAME			1		
7L130ME					
7431MF					
TL/32ME			<u> </u>		
	1				
72134MF					
TLISAME		<u> </u>			
TL13bme		<del>                                     </del>			
TL13719E	1 1	<u> </u>			
74138ME	l <b>1</b>		-		
TLINGME					
TL I HOUSE		৳	. 🗸		
Special Instructions:					
1. Sampled by: Makk Em 2/20/08 17:00 Received by: 91 2 20 08 500					
2. Relinquished by: 40 2 21 08 900 Received by: WANTER SON 108 9454					
3. Relinquished by:			Received by: [ To 222083/1000		
Please include signature, date, and time					
Lab Use Only:		<u>&amp;</u>			
			\$1\\ 300		
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(316) 376-2474 FAX www.hygienetech.com

se Order: 20	2802001	Date Submitted: 2/21/08		
	Wes Frey	Turnaround Required: Blandand		
EML		Lab Contact:		
VOLUME	MEDIA	ANALYSIS REQUESTED		
W/A	Bistope	Surface Gange ID		
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Special Instructions:				
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Wr b	- /	Received have 61 7 70 hg 5.00		
7 21 A	0108 11.00	Received by: 4 2 20 18		
1-121				
	Please include signs	Received by: Forzes 1000		
Lab Use Only:				
		<u>[7]</u>		
		391390		
	EML VOLUME W/A V	VOLUME MEDIA  N/A B, 2/20/08 /7.00  2 21 04 7:00		